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NAPLES

AND ITS

MINERAL WATERS.

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THE ISLAND OF ISCHIA.

HINTS

FOR

INVALIDS ABOUT TO VISIT NAPLES;

BEING

A SKETCH OF THE MEDICAL TOPOGRAPHY

OF THAT CITY.

ALSO AN ACCOUNT OF THE

MINERAL WATERS

OF THE

BAY OF NAPLES;

WITH ANALYSES OF THE MOST IMPORTANT OF THEM, DERIVED FROM AUTHENTIC SOURCES.

With Engravings.

BY

J. C. COX, M.D., F.L.S.

LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS, FELLOW OF THE ROYAL COLLEGE OF SURGEONS, AND FELLOW OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY IN LONDON, MEMBER OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH, ETC.

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PREFACE.

The following pages are presented to the public in the hope that they may in some degree supply the oft acknowledged deficiency of a guide to the medical topography of this interesting country. In the relation of facts there is little field for originality, while any desire to dilate on the classic beauties with which it abounds has been suppressed, in furtherance of the wish to convey, in as simple a form as possible, such information as may prove most subservient to the prominent object of the work. If it possess any merit, it is that only which is founded on accuracy of detail

On visiting England last year I was surprised to find how little my professional brethren were aware of the extensive suite of mineral waters of the bay of Naples. Of the false impressions existing respecting it there has been much reason to complain. The work of De Renzi "On the Topografia Medica del' Regno di Napoli," is little known out of the kingdom. I have availed myself of the information it contains, and of the work of Mons. de Rivaz, entitled "Descrizione delle Acque Minerali, e delle Stufe Dell' Isola d' Ischia."

I am also specially indebted to the "Analysi e facoltà Medicinali delle Acque Minerali di Castellamare;

A SKETCH

OF THE

MEDICAL TOPOGRAPHY OF NAPLES.

CHAPTER I.

NAPLES and its beautiful Bay, have been so amply described in all the Works on Southern Italy, that any further account of them may seem to be superfluous. Its Medical Topography, however, has met with fewer historians; and there is still wanting some detailed account of the characteristics of its climate and soil, as adapted for the residence of invalids. Having resided some years in that city, and being thus probably, enabled to form a more correct judgment than those who have seen it only as occasional visitors, I shall devote the following pages to the purpose of exhibiting a history of its climate, and medical character, and of examining how far it is fitted for the winter's sojourn of an invalid.

The extreme benefit I have received to my own health, and that of my family, claims this return. With a constitution shattered by the fatigues of professional life, in the climate of England, and with a mind, worn by the anxieties of constantly watching over the sick beds of my children, who

were subject to frequent attacks of croup, and pulmonary disease, many of whom were consigned to the tomb, and the others saved as by miracle, I may well yield my grateful tribute to the climate of Naples, which has removed every painful cause of my personal indisposition, and rendered my children healthy, strong, and vigorous. I trust however, that these circumstances will not give the impression that I have written with undue bias, nor prevent the following statements from being received, as the result of some years of calm and careful observation and reflection, drawn from the consideration of those cases, which have come under my care. The Mineral Waters of Naples are still but little known to my professional brethren; although there exists in the circuit of the Bay, a series of Medicinal and Restorative Springs, equal in quality, and superior in variety, to those of any district of equal extent in any country. The history of these springs is well worth investigation; the reputation of some of them was established long before the time of Hippocrates, and they are still resorted to, by great numbers of the inhabitants of the two Sicilies. It is to be regretted, that sufficient pains have not been taken, to render them generally known, and available to foreigners; and we earnestly hope that the attention of his present Majesty, who has already devoted so much care and expense to the improvement of Naples, will be directed to this object, which will necessarily prove a source of great wealth and benefit to the country. A place so interesting in all the

objects of antiquarian research, and of natural history, affords many temptations to digression; I shall, however, endeavour to confine myself as strictly as possible to the subjects I have proposed for investigation; as otherwise my work would be prolonged far beyond the limits I have assigned to it.

Great Britain, which stands pre-eminent for its religious, moral, political, and scientific advantages, has, unhappily, some peculiarities of atmosphere, very uncongenial to certain constitutions. It is true that from the varied character of its surface, many grades and differences of climate may be obtained, and a variation of temperature of several degrees, may be found, by selecting some particular situations in the Southern parts of the Island. But although it is of great importance to the invalid to secure a mild atmosphere, without sacrificing the comforts which are only to be found in our own country, yet temperature is only one of the many points for consideration.

England, from its insular position, is exceedingly exposed to humidity, the effects of which, when combined with cold, are very injurious: thus, although our country is not so cold as many parts of the adjacent continent, under the same parallel of latitude, yet its climate is more trying to man, to animals, and to plants. A succession of frost and thaw, with the thermometer fluctuating between 28° and 36°, is far more injurious, than a steady cold of

20^0. In the latter case, much of the moisture in the atmosphere is precipitated; the air becomes more dry, and therefore, not so good a conductor of heat, as when charged with humidity; and if there be no wind, we do not suffer so much when the thermometer is ten degrees below the freezing point, and the air dry, as when just below, or above that point, and loaded with moisture; such as accompanies a cold fog in England.

But notwithstanding this, it may perhaps be alleged that the rate of mortality is less in Great Britain than in most other countries; and that that country must be the most healthy, in which fewest die. But the physician has to do, not with the rate—but with the exceptions. The constitution of the inhabitants of a country is mercifully adapted to the climate in which they are born; and the efforts of science and of intellect, are directed towards obviating the disadvantages, and ameliorating the evils, to which they may be exposed; and in proportion to the refinements of civilization will this be more apparent. Statistical details, although exceedingly valuable, are not always to be implicitly relied on, as they occasionally lead to erroneous conclusions. Thus the rate of mortality in London, is one in 45, and in Naples, one in 30, a difference so great, that it might at first startle us; and the hasty conclusion would be, that Naples was a place most unfavourable to health: a deduction which would be most erroneous.

The rate of mortality in London is less than might be expected, from the disadvantages under whieh it labours, for the following reasons:

1st. The admirable position of the eity, on the banks of a clear and rapid tidal river.

2nd. The eareful cleanliness and sewerage.

3rd. The ample supply of water afforded to all the houses, by which the impurities are quiekly and entirely removed.

4th. The improved state of medieal scienee.

5th. The large proportion of the population enjoying the eomforts of life, few being in absolute destitution in consequenee of effieient poor-laws.

6th. The almost infinite number of hospitals, infirmaries, and dispensaries, by whieh the sick poor are adequately and promptly attended.

The proportionate rate of mortality in Naples, on the contrary, is very mueh inereased by the following cireumstanees:

1st. The great proportion of the poor, to the rieh.

2nd. The having no parochial provision for the poor; who are therefore dependant on private charity, whieh, although very liberal, is inadequate to preserve a great number of the people from destruetion.

3rd. The imperfeet sewerage, the great want of eleanliness, both personal and domestie, of the lower classes; the supply of water being obtained for the most part, from the publie fountains, whieh are comparatively few, and distant.

4th. The unhealthy climate of that quarter of the city, in which the poor principally reside; their apartments being mostly situated on the ground floor, exposed to the exhalations from the soil, and deprived of proper ventilation.

5th. The unwholesome nature of their food; which consists, chiefly of uncooked vegetables and fruit, and of a wine which is acescent.

6th. The grievous mortality in the hospital of *enfans trouvés.*

7th. The limited number of hospitals; and those which exist being, though large, much too crowded: the want of dispensaries, for affording gratuitous medical advice; and the deficient science and education, in the second rate medical practitioners.

But in the higher classes of society at Naples, the rate of mortality is very small; certainly not greater, than in other most favored countries; the instances of longevity are numerous, and the number of aged persons at least as great, as in other cities.

There are two disadvantages then, in the atmosphere of Great Britain: viz., low temperature, and humidity; but especially, the union of the two; to which the peculiar climate of other countries affords the most salutary and complete counteraction.

It is true, we may obviate the evils of cold, by a careful regulation of fires and apartments; but we render the constitution more susceptible, and the nervous system more irritable, by the confinement.

To alter the relative dryness of the sick chamber

is not easy. We cannot exclude fog or damp, although we obviate their ill effects, in some degree, by raising the temperature, and thus increasing the capacity of the air, for moisture; but we still expose our patient to the evil of close apartments; and on the slightest exposure, the symptoms become aggravated, and that too, under circumstances the least likely to counteract the morbid tendencies. There is no state of climate so favorable to the developement of tubercular disease, as cold and humidity; and especially where there is predisposition to its formation, whether hereditary or otherwise. This is in no instance more clearly exemplified, than in the condition of the menagerie of the Zoological Society of London. The subsoil being a tenacious clay, all the moisture is retained on the surface, and the effects of the fogs of our climate are aggravated, and all the resources which watchful scientific care, and the most enlightened medical means can suggest, have been almost ineffectual. The elk, and the rein deer, from the cold and dry woods of Sweden, and the tiger from the warm and swampy shores of the Ganges; the lion from the dry and scorching deserts of Africa, and the quadrumana from all the inter-tropical countries, suffer lamentably on being transferred to the climate of England. In all of them tubercular disease quickly developes itself, and they rarely long survive the transition. And yet, if temperature were all that was required, such would not be the result,

as the heat of the apartments is carefully regulated by the thermometer.

But our treatment must go still farther than this. We must endeavour not only to observe the causes of tubercular disease, but also to select the situation most unfavourable to its progress: not only to avoid those circumstances which most predispose to the production of it, but to obtain those which tend most to strengthen the constitution, and promote the general health. To this end, a tonic and marine atmosphere is peculiarly beneficial; and where the evil is only in its incipient state, is often sufficient of itself, to effect a permanent good. Much also depends on combining mental occupation, with a salubrious position, and on selecting amusements, which lead to healthful exercise in the open air: rides, which conduct to beautiful scenery and objects of classic interest: pursuits, which tempt the invalid abroad into an atmosphere, dry, strengthening, and invigorating; while from the steadiness of the climate, there may be no fear of sudden change;—boating or sailing, under a sky not often shrouded in storms and tempests: these are the means to be most depended on, for relief of such cases.

Plants form an excellent barometer, or measure of the nature and character of the atmosphere, and we may rely on them with much confidence, for such an object. The growth of the March plants, Juncus, Carex, Iris, Callitriche, Potamogeton,

Sium, Hydro-cotyle, Ranuuculus, Typha, Lemna, &c., is a strong proof of the presence of an atmosphere unfavourable to the production of fever. Plants become sickly and etiolated, when there is a deficiency of light: while vigorous shoots, dark foliage, and brilliaut inflorescence, are the almost certain results of a bright and healthful atmosphere. So also in man, the pale and sallow faces of children living in cellars and close streets of manufacturing towns, are well known to every observer.

How beneficial, on the contrary, is a clear, bright, luminous atmosphere! how favourable to the growth of childhood, and to the development of physical and intellectual qualities!

It appears then, from the preceding observations, that a situation such as that of Naples, having a dry marine air, and a stimulating and luminous atmosphere, holding out many attractions and amusements for excursions out of doors: with a sky not subject to sudden changes; the rains, though heavy, always accompanied with a south west wind, and a mild temperature, quickly passing away, leaving but little trace of damp: with a winter always mild, and a summer long and brilliant; that such a place must surely form the beau ideal of a residence, for the prevention or cure of incipient tubercular disease.

CHAPTER II.

The city of Naples, the ancient Partenope, is situated at the bottom of the bay of Naples, having an aspect to the South and South East. It is divided into two parts, by the hill of Pizzo-falcone, which extends into the sea, and on its extreme point is placed an ancient castle, the Castello dell' Uovo.

The Riviera di Chiaja, the quarter principally inhabited by visitors, extends from the hill of Posilippo on the West, to that of Pizzo-falcone on the East: having a long extent of shore facing the South, and defended from the westerly and easterly winds, by these two hills, and from the North by the hills of the Vomero, Capo di Chino, and Capo di Monte: on the crest of this range, and over-topping the city, is placed the castle of St. Elmo, a strong fortress, the ornament, as well as the defence, of Naples. The other part of the city extends from Pizzo-falcone in an easterly direction along the shore, and to the North towards Capo di Monte, and open to the plain that extends from Capo di Monte to Somma and Vesuvius. This plain, formerly called the Palude, being at that period a tract of low and marshy ground, is now most carefully drained and cultivated for the purpose of supplying the city with vegetables.

The latitude of Naples is 40,51.
The longitude from Ferve 30,25.

It has a mean temperature of 61° of Fahrenheit; and its atmosphere, during the whole of the summer months, is refreshed by a succession of sea and land breezes; the former prevailing from ten o'clock in the morning, till five in the afternoon, agitates the waters of the bay, and produces a delicious coolness in the hottest weather, preventing the temperature from becoming oppressive: while the land breeze gently blows from nine or ten o'clock P. M., till dawn, and thus moderates the heat of the night. Fine weather prevails continuously from April to November, being interrupted only by the solstitial and autumnal rains, which occur in July and September respectively, and continue only two or three days. The temperature is so moderated by the sea breeze, that the thermometer affords but a fallacious test. It is however rarely above 86° or 88° in the shade at noon, during the summer months, a degree of heat very common in Paris, and not infrequently felt in London. In observations made for five years at the Royal Observatory of the Marina at Naples, the maximum of the thermometer was 93° on the 14th of August, and the maximum 31° on the 1st of January. In winter the temperature is seldom below, from 40° to 44°, by night, and from 50° to 55° by day. It is rarely below the freezing point, and even if so low, it never continues so for more than one, or two nights. On the 30th of December 1838, the thermometer fell to 30°, but in the course of the next night it rose to 42°.

THE FOLLOWING TABLE EXHIBITS THE MEAN AVERAGE OF THE THERMOMETER FOR THE SEVERAL MONTHS IN THE YEAR, WITH THE AVERAGE NUMBER OF RAINY DAYS.

MONTH.	Mean Temperature.	Number of Rainy Days.	MONTH.	Mean Temperature.	Number of Rainy Days.
January	45°	6	July	76°	3
February	48°	7	August	76°	4
March	52°	5	September ...	71°	8
April	57°	8	October	62°	7
May	66°	6	November	55°	3
June	70°	none	December	51°	8
Average number of rainy days 65. Mean Temperature Fahrenheit 61.					

ON AN AVERAGE OF 16 YEARS OBSERVATIONS AT THE ROYAL ASTRONOMICAL OBSERVATORY AT NAPLES.

Mean temperature at sun-rise 55·3 F.
Ditto at 2 o'clock P.M. 66·5.

The months of October, November, and December, are usually very mild and pleasant. The greatest cold is generally in the month of January.

The Appennines are not covered with snow till the middle of February; from which time till the melting of the snow, Naples, like all other countries in Europe, is liable to cold winds from the mountains, which lie to the North and North East of the city. These Tramontana winds, which in fact constitute winter, (although the thermometer may be lower in the month of January) occur in all dlaces which are in the vicinity of mountain ranges,

and where the heat of the sun in the valleys, is considerable. The air in the lower lands, rarefied by the warmth of an unclouded sun in a clear atmosphere, ascends, and is supplied by that which has been cooled on the mountain tops, which rushes down to supply its place. The nearer the situation to the mountain ranges, the more severely is this felt. In Nice it is very severe, and is there called the Maestrale. In Genoa, in Bologna, in Florence, and in Rome, the same winds prevail: there, and in other parts of Italy, called, Tramontana; they cannot be evaded in any part of Europe, they are experienced at Malta, and occur, though in far less degree, at Madeira. They are equally felt at Rome, as at Naples, that city being at least as much within the range of the Appennines: and occur still more at Florence than at either of the former places, from its being nearer to, and surrounded by snowy peaks. The sky is clear and blue, during the prevalence of these winds, and the air is hygrometrically dry. As soon as the snow melts on the mountains they cease to prevail, and summer bursts with all its beauty on the country.

The Villa Reale, which is the fashionable promenade of Naples, is sheltered from the Tramontana by the hill of Pizzo-falcone; and if those who are in a delicate state of health confine themselves to that situation, there are very few days in the year, in which the most susceptible may not enjoy the benefit of the open air. A gentleman kept a register of a year's residence at Naples, and he

reported only thirteen days, on which he could not walk out with comfort. The Villa Reale therefore, like the Lung' Arno at Pisa, forms at these periods the only safe walk for the invalid. In Rome, Florence, and Pisa, in the same way the patient must walk in some sheltered place, or along the banks of the Arno, if he would escape cold winds.

The part of Naples on the eastern side of the Pizzo-falcone is not desirable for invalids, during winter, in consequence of its being exposed to the full influence of the Tramontana, although it is the coolest part of the city, in summer.

In an atmosphere so clear and cloudless as that of the South of Italy the terrestrial radiation is very great : hence, the freezing effect during a moderate depression of the thermometer, is considerable. Snow is rarely seen at the level of the sea ; and if it fall, it melts immediately. In Rome during the winter of 1840 the snow lay some inches deep, for several hours. Vesuvius frequently has its cone whitened during the winter, but it is usually soon clear again, although in 1840 the snow remained longer, and covered the mountain to a greater extent than was ever remembered. The valley between Naples and Somma is the only part, open to the Appennines, through which the Tramontana winds blow on the city. The view of this long range of lofty mountains during winter, capped with snow, as seen from Santa Lucia, is exceedingly grand and picturesque.

The Scirocco, which may be either Scirocco Le-

vantc, or S. E. ; or Scirocco Ponente, or S. W., occurs at occasional intervals during the summer, and usually ushers in the periodical rains, at which time, the usual sea breeze is interrupted, the thermometer high, and there is no air to moderate the heat: this lasts 24 or 48 hours, and then the rain succeeds in refreshing torrents, which cool the atmosphere, and saturate the soil; the wind shifts round the compass, and fine weather is re-established. In autumn, and winter, the rains and storms recur, at shorter intervals, and last about three days.

The effect of the Scirocco, even at Naples, is very oppressive to the nervous system during the heat of summer, although it is not felt there nearly so severely as at Palermo. All nature seems to suffer from its influence, the air is still, the sea calm and leaden, the vine and the fig tree hang their leaves, animals are languid and oppressed, and the whole atmosphere is in a highly electric state. How changed are the sensations, when this electric condition is altered! the lightening flashes from mountain to mountain; Vesuvius, that mighty agent of electric influence, appears to be the centre of its action: the thunder rolls in terrific peals, increased in a tenfold degree by reverberation; then falls the rain, and all nature is refreshed; the depression of the nervous system ceases, and is succeeded by a delicious state of excitement and exhilaration.

These storms have a great and painful effect upon delicate and susceptible nervous subjects, but the

change of weather removes the irritation or depression, and restores the *bien etre.*

It is much to be regretted, that our researches on the relation of electricity to health, and its effects upon peculiar constitutions, have not been more extensively pursued. Here is doubtless a field for much interesting investigation, and one which, if carried out, would open to us many new and important facts. The effect of Scirocco in winter, is much more agreeable. The southern gale loaded with moisture, brings heavy storms; the air then clears, and a soft delicious day succeeds, mild and agreeable to the respiration, and grateful to the feelings of a delicate invalid. To those who suffer from weak lungs, or from a state of irritable mucous membrane, the Scirocco is most grateful, and soothing.

The following is the average proportion of wind which prevail during the year:

	Days.		Days.
South	60.	North	36.
S. West	96.	N. East	48.
S. East	30.	N. West	45.
West	40.	East	10.

It will thus be seen that Naples is open to the southerly and westerly winds, which prevail more than two thirds of the year, and that it is sheltered from the northerly and easterly winds, which blow about one third of the year. The southerly gales

bring the sea boldly into the Bay, its surf dashing against the whole of the coast; but these winds in winter are warm and balmy, and in summer constitute the sea breeze, which refreshes and purifies the town. On the whole, few places are more blessed with winds which are genial and wholesome.

The climate of Naples has been stated to be very variable. Those who will take the pains to examine meteorological registers, kept for many years at the Royal Observatory, will be surprised at the uniformity, and the steady range of the thermometer.

The mean daily range founded on observations for 16 years, is 11^0 5′ Fahrenheit. In a room having a south eastern aspect, and without a fireplace, the variation of a good register thermometer, kept during the month of December, was—

Mean maximum.....62^0 3′
Ditto minimum.....54^0 8′

Mean daily variation.....7^0 5′

	Mean maximum.		Mean minimum.		Mean daily variation.	
	London.	Naples.	London.	Naples.	London.	Naples.
January.	39°,8	55°	30,4	44,3	9,4	10,7
February.	46°,1	58°	34,5	46,7	11,6	12,2
March.	50°,9	52,2	35,9	41,7	15,	10,5
	Maximum.		Minimum.		Variation.	
1810.	London.	Castellamare.	London.	Castellamare	London.	Castellamare.
August.	87°	85°	45°	59°	42°	26°

It will thus be seen, that the mean diurnal variation of the thermometer is far less than is generally supposed. That unseasonable, and unusual changes of temperature do occasionally occur, and that a variation which is common to all countries may be here also considerable whenever the wind changes suddenly from Scirocco to Tramontana, no one can doubt: this change, however, is but rare, and certainly is not more common than in any other city in Italy. In January, February and March, the mean daily variation was 10^0 7′, 12^0 2′, and 10^0 5′ respectively, although these are the months of greatest variability throughout the year, from being the period at which Tramontana most prevails.

In some observations made by Professor Tenore, and by Dr. Hogg, on the period of unfolding of the buds of trees, it was found that in consequence of the spring being retarded by cold winds, the vegetation of certain plants occurs only about a month earlier at Naples than in the neighbourhood of Paris; but the interval of spring is short, which bursts almost suddenly into the beauty of summer. The China and Bengal roses blossom all the winter in the open air; the yellow and blush rose de Thé, are in beauty from November to April; the narcissus flowers in December; carnations, heliotrope, geraniums, and jasmin, present a succession of bouquets, from December to May. The camellia grows freely in the open ground; alyssum saxatile, vinca major, violets, &c. blossom all the winter;

the apricot and the almond in January; spartium scoparium in February; the Judas tree (Cercis Siliquastrum) in the end of March; the fig unfolds her buds in the beginning of April, and the Cyclamen Coum is also found then, on the banks. The Anemone and Ranunculus, of a magnitude and beauty, that would astonish even an English horticulturist, are in full flower, and are quite as forward at Easter, when they are gathered for the purpose of decorating the churches, as they are in England at Whitsuntide. The palm tree and the banana grow in the garden of the Villa Reale; the cobœa scandens flowers almost the whole year. In the market, green peas are sold from November to May; and cauliflowers and Roman brocoli, all the winter.

The Sylvia hippolais, hortensis, and atricapilla, sing among the evergreens in the Villa Reale, from the end of January.

The soil of Naples is of a light sandy character, and resting upon a porous Tufa, through which water readily percolates. Hence the effects of rain quickly pass away, and as soon as the storm subsides, the invalid may with safety walk in the Villa Reale. Wells are easily made in this tufous rock, and water is found very near the surface; but it is brackish and unwholesome, producing diarrhæa and dysentery in strangers. The rock on the opposite part of the Bay, at Sorrento and Castellamare, consists of a fine limestone, from

which beautiful water may be obtained. There are many fountains in Naples which are supplied with water from two streams arising from the elevated country at some miles distant, and are conducted in covered aquæducts to the city. The one named the Volla arises from the foot of Vesuvius, and is conveyed to the lower parts of the town near the Porta Capuana. The other is the Acqua di Carmignano, which arises by various sources from the mountains near to Caserta: part of it is distributed to the royal gardens of that splendid palace, and after returning to the bed of the Carmignano, is ultimately conveyed by a covered aquæduct to Naples, where it supplies various fountains in different parts of the city. There are also some springs in the city itself, as the Acqua di San Pietro Martere, del Vico Carbone, &c. &c. The best water is obtained from the Fontana di Nettuno—di Santa Lucia, and del' Leone; from the latter, which has its origin in the hill of Posilippo, the royal palace is daily supplied. Strangers should be careful to obtain water from one of these fountains,—a measure of importance towards the preservation of their health.

The markets of the city are well supplied with good and wholesome food, at a moderate price; the animals are killed at an extensive abattoir outside the town, and under proper inspectors. The quantity of animal food consumed is small in proportion to the population, as a very large number

subsist on fruits and vegetables of all sorts, which are exceedingly fine and plentiful, and astonishingly cheap.

The principal fruits are cherries, apricots, both of which are common and large Moor-park plums in great variety, grapes, figs, peaches, melons, albicocché, water melons, all in profusion. Meat and poultry are excellent and cheap. Of game, there are wild boar, roe-buck, hares, quails, and woodcocks, in abundance. Partridges and pheasants are rare. Fish is inferior to all that is found on the British coast, and quite as expensive.

The hygrometric character of the air is that of extreme dryness. Fogs are unknown; the clouds from the south-west are precipitated in heavy storms, and the atmosphere soon resumes its former character. Leslie found that dry vegetable mould was one of the best absorbents of humidity; and recommended it for the purpose of drying air in close vessels. The vast extent of dry sandy mould and of volcanic ashes, rapidly absorbs the moisture from the air, in these countries. During the day the earth is heated to a temperature of 90° or 100°; and although in some degree shaded by vines, is rendered perfectly dry and absorbent. In England the soil is so much covered with grass and green crops, that it is rarely exposed to the sun during the hot months, sufficiently to affect the superincumbent atmosphere, to any considerable extent.

The vicinity of Vesuvius exercises a two-fold influence on the atmosphere of Naples.

1. From intense subterranean heat and powerful exhalations.

2. From the great electro-chemical influence which it exerts all around.

During the period of quiescence, there are constant deposits of earthy and metallic salts and oxides, within the limits of the crater, or in its immediate vicinity. The fixed substances that are found on the mountain, and which are constantly being deposited, are as follows:

Sulphur in chrystals.
Sulphate of lime in various interesting forms,
Muriate of lead.
——— copper.
Sulphate and sulphuret of copper.
Muriate of Iron.
Sulphate of Iron.
Red sulphuret of arsenic in ruby chrystals.

The volatile products are—

Vapor of water,
Fumes of muriatic acid gas.
Sulphur in sublimation united with chlorine, and
Sulphurous acid gas, both in fumes of very high temperature.

All these exhalations are rising when the mountain is in a state of calm; but who will venture to describe the products of an eruption?

But although all these depositions are constantly taking place in the crater, and the acid fumes are perpetually arising from it, yet it is doubtful if any material injury is produced to animal life at any great distance from its mouth. Plants are delicate tests of a bad atmosphere, as before stated, and are quickly affected by a very minute portion of metallic or other noxious impregnation; but the

vines at the foot of the cone of Vesuvius, grow with unwonted luxuriance, and the wines of the mountain are unequalled in quality and flavour. The fig trees flourish all around its base, and it is only on the summit, and on the recent streams of lava, that there is any sign of barrenness. And although, doubtless, during an eruption, vast volumes of noxious exhalations are poured forth, yet they are probably soon absorbed, and rendered innoxious, by the great expanse of water of the Bay.

The action of the mountain, however, is not confined to its base, but extends over an area of many miles in circumference; hot springs and stufe, and other evidences of subterranean fire, occur at various distant parts in the circuit of the Bay. There are the stufe of San Germano, and grotto del' Cane, at lake Agnano, the Solfaterra, constantly smoking, the hot springs of the temple of Serapis, the baths of Nero at Baiæ, and still more striking phenomena in the island of Ischia, all at different and distant parts within the circuit of the vast crater of the Bay; and it is fair to conclude that these are but distinct parts of the same chain of influences, and that the whole intermediate space is, at some distance below the surface, the centre of mighty volcanic action in constant exercise, and which, did it not find a continuous vent from the open mouth of Vesuvius, would prove destructive to the entire country around.

But there is another kind of action, of which

Vesuvius is the centre and the source: viz. electro or electro-chemical.

The effect of the neighbourhood of a volcano on the human frame is very little observed or understood. That a very powerful electric action is going on in Vesuvius, and other volcanos, no one can doubt. The constant change that takes place place in the chemical relation of bodies acted on by it, must necessarily cause the evolution of electricity to a prodigious extent. These phenomena become sometimes cognizable to our senses; clouds are formed over the cone, or attracted to its side, from which they are awhile suspended, and then are detached and repelled. Sometimes dark volumes of cloud collect over the horizon, while the thunder pealing in the distance indicates the rapid approach of storm. Attracted by the mountain, the lightuing flashes down the crater, while the fearful rolling of the clouds encircling it reverberates in oft repeated echoes from its sides. A calm succeeds, and all is dispersed. What is this but the electric agency of the mountain? The effect on some susceptible and nervous subjects is very striking, causing headache, general nervous pains, great irritability of the system, sleeplessness, and an almost irrepressible degree of excitement. The influence of so powerful an electric agent in such cases, is manifestly injurious.

The stimulating character of the atmosphere of Naples, which is peculiar and most agreeable to those who are not too excitable, is probably in

some measure depending upon electric influence as well as on its pure and marine character. That this very stimulus constitutes one of its most important characteristics there can be no question; but at the same time, it is one which requires much consideration in selecting Naples as a residence for persons of some forms of constitution.

Naples is not exposed to mal-aria. The lakes of Averno, Agnano, and Fusaro, are certainly insalubrious* in the autumnal months, as is the whole of the plain on the western side of Posilippo or Fuori-grotta, and the country around Pozzuoli, Baiæ, and Cuma, and it is rendered much more dangerous by the practice of soaking hemp and flax in these lakes. The rains, however, which destroy the cause of mal-aria, remove all fear of evil; and the whole district has been much benefited by drainage, which has been effected to a considerable extent; but it is not prudent for a stranger to roam about these beautiful, but treacherous scenes, till after the autumnal rains.

Naples itself is effectually separated from the influence of mal-aria on this side by the hill of

* The Sibyl's cave is still exhibited on the shores of Avernus.

"Spelunca alta fuit vastoque immanis hiatu
Scrupea, tuta laeu nigro nemorumque tenebris:
Quam super haud ullæ poterant impune volantes
Tendere iter pennis: talis sese halitus atris
Faucibus effundens supera ad convexa ferebat
Unde locum Graii dixerunt nomine Avernum."

There certainly do not appear to be any exhalations from Avernus at present of the kind described by the poet: it is,

Posilippo. The plain which is situated between Naples and Somma, called the Palude, is not now productive of mal-aria, properly so called. Intermittent fevers occasionally occur there, but it is so intersected and drained, and so thoroughly cultivated, that it is not now a source of typhus.

Low fever occurs in autumn at Naples, as in all large cities, even those the most generally salubrious, and arises probably in a great measure from crowded apartments, combined with the ills of poverty. It is principally found in the lower parts of the city, which are crowded with population, badly cleaned and drained, and rendered still more insalubrious by the kind of occupation particularly that of the manufacture of harp-strings and cat-gut. The whole of the belle quartiere, including Mergellina, the Riviera di Chiaja, St. Teresa, Largo, Capella Vecchia, Chiatamone, St. Lucia, and the Largo del' Palazzo, as also the whole of the Pizzofalcone, are clean, airy, well drained and lighted, and exceedingly salubrious. The population of Naples is nearly 380,000; the proportion of births is one in 24, and of deaths, one in 30, of the population; the usual period of marriage is from 18 to 25; the greater number of births are in the months of February, March, and April; the proportion of

however, very possible that the fumes of the Solfaterra in the immediate neighbourhood may be shunned by birds who are very susceptible of any injurious agent in the atmosphere: the woods around are silent, and a gloom and stillness prevail at the present day around the lake, which is very striking.

females exceeds that of males by one in 16 or 17, although there is a majority of male children born in proportion of $\frac{1}{36}$. In legitimate births the male exceed the female, in illegitimate births the contrary obtains; but, on the whole, the number of males born exceeds that of females, as before mentioned. It is stated, on good authority, that at least one fourth of the diseases of males are either depending upon, or complicated with, disease produced by dissipation; and that of the out-patients who apply for relief at the Ospedale degl' Incurabili, the males, with a very small exception, are all suffering from diseases the result of vice. At the same time it must be admitted, that many affections are there termed Syphilitic which would not elsewhere be so designated, and which are cured by very simple means.

Those persons, more especially invalids, who propose to make Naples their winter residence, would do well to avail themselves of the following suggestions.

1. That the apartments for an invalid should have a southern aspect: this is quite essential throughout Italy. A south room, at Naples, has the sun in winter, and receives the sea-breeze in summer. There is sometimes a difference of from 30° to 40° of Faht. between the north and south side of a house at noon; and in a room with a south aspect, the thermometer will rarely fall below 60° throughout the winter, even without fires. During the night there is but little difference.

2. None of the apartments should be exposed to the Tramontana winds, or NE.

3. The apartments should not be too near the Tufa rock through which the offensive fluids from the drains often percolate, causing unpleasant and unwholesome effluvia.

4. A second or third floor is to be preferred to the ground floor, because the streets being paved with lava are very noisy, and also in a country where the rains are heavy and the evaporation is great, it is better not to be too near the ground.

5. An upper floor is damp and cold in winter, and hot in summer, unless there be a double roof or astraco. If the house have a flat single roof, the rain causes it to be very damp, and the heat of the sun renders it unpleasantly hot. Almost all good houses have a double astraco or are roofed.

CHAPTER III.

IS NAPLES A GOOD WINTER'S RESIDENCE?

In answering this question we must go a little into detail.

The months of September, October, November, December, and January, are beautiful, and of a temperature very favourable for an invalid. No place yields greater temptation for various forms of exercise. The lovely shores of Lago d' Agnano, Baiæ, Cumæ, Lago d' Averno, di Fusaro, Pompeii, Amalfi, Sorrento, La Cava, Pœstum, Caserta, Camaldoli, Capo di Monte, &c. all afford delightful excursions, full of classic interest, and calculated to produce the highest gratification. The first three months are peculiarly adapted for exploring these interesting places. The rains of autumn, which occur early in September, have refreshed and cooled the earth, the vines still sustain their beautiful purple burden, and it is not till the end of November that they are bare of leaves.

With common precautions the months of February and March may be passed without any danger, and certainly with as little inconvenience here, as in any place on the Continent. The mean temperature of the months of February and March is 48° and 52°, respectively; the thermometer at

noon being from 55° to 60° in the shade, and at night from 42° to 46°. In the sun, the thermometer rises to 70° or 80°.

Temperature of February 1839, the thermometer in a north aspect.

Highest.....68°
Lowest.....38°
Daily mean highest.....58°, 5
———— lowest.....47°, 4
Mean.....52°, 9
No. of rainy days.....3

Temperature of March 1840. This was much below the average, the snow being on Vesuvius ten days.

Mean highest.....52°, 2 north aspect.
—— lowest.....41°, 7 ————
Mean at noon.....66°, 4 south aspect.
Highest in the shade.....60°
Lowest ditto.....35° at night.
Highest in the sun.....90°
Number of rainy days.....10

The above details will give the most correct impression of the character of the season.

The invalid should, during these months, restrict his rides to the Riviera di Chiaja, the shores of the bay of Baiæ, or the Strada Nuova; return home by four o'clock, and shun evening assemblies. Happily the carnival is now passed, and balls are proscribed during Lent, very properly, by the Romish Church.

The under dress of all persons should be of flannel or merino knit, from November till May, and knit cotton during the rest of the year; which latter is the most eligible summer wear, as it absorbs perspiration and prevents the annoyance of insects. The Villa Reale forms a pleasant and sheltered walk for the invalid, being defended from the cold winds, and always dry.

With moderate precaution then, the winter, if it may be so called, may be passed without inconvenience or danger; and, during this season, Naples offers advantages as great, or greater than any city on the Continent. Rome has no walks so well defended as the Villa Reale; one side of the street often glowing with the heat of summer, while the other is cold, and damp as winter. Florence is the least eligible of all places for the invalid in winter, though lovely and delightful in spring and autumn. Nice has the Maestrale, which is almost irrespirable. Pisa, perhaps, along the Lung Arno, is the most defended of any place; but, if the patient extend his walk beyond this limit, he is stricken with the cold blast; and in the *agrémens* of society both of Rome and Naples, it is very deficient.

Nor must the Bourbon Museum of Naples be forgotten, as one of the amusements of the winter months; to be visited, however, only with thick shoes, woollen socks, and a warm cloak. In it the relics of Pompeii and of Herculaneum afford increasing pleasure; we there enter into the

domestic habits of the inhabitants of those cities, and learn that in many of their tastes and acquirements, their tools of art, and other instruments, they were as advanced in refinement as we are at the present day.

The months of April, May, and June include all that is delightful in temperature. This is, therefore, the best season for excursions to all the various scenes in the neighbourhood.

Naples is not a desirable residence during the months of July and August, excepting on the hill of the Vomero, or at Capo di Monte, above the city. The intense heat of the sun on the lava streets, again reflected from the houses, renders the temperature of the Chiaja excessive; and although it is moderated by the sea-breeze during the day, yet, when that subsides, the air is close and oppressive, and the nights are intensely hot; for the land-breeze, though felt in the Bay, has little effect on the Chiaja; so that there is a difference only of about five degrees between mid-day in the shade and mid-night. At the opposite side of the Bay there is a great difference, the variation at Castellamare being from 10^0 to 15^0 between mid-day and mid-night; and the same is the case at Vico, Massa, and Sorrento, where the land-breeze has its full influence.

The usual course for invalids has been to leave Naples before the holy week, for Rome; immediately after which, they proceed to Florence, and thence cross the Alps to England. They have

thus obtained only the negative benefit of avoiding the inclemency of a winter in England, and return thither just at the commencement of summer, and very often before summer has begun. But this is not all: in the route homewards, Alpine passes are to be traversed, or equinoctial gales to be encountered; and, on arrival in England, the summer is probably not set in, and the cold winds still prevail. The following are extracts from my journal, on a visit to England in charge of an invalid in 1839.

"Left Naples, April 4th, for Rome. Weather deliciously warm and pleasant. Judas tree in blossom in the Villa Reale; fig trees unfolding. In the route, the Judas tree in blossom in the hedges near Terracina, large herbaceous euphorbia, cyclamen, coum, &c. on the banks by the road side. Nightingales singing in the Pontine marshes.

"6th of April, arrive at Rome; weather fine, but very cold; fire in my room the entire day.

"9, Leave for England.

"11, Sleep at Sigillo; very, very cold; snow all around.

"13, Pesaro on the Adriatic; pleasant and mild.

"14, Bologna; very warm.

"16, Padua; cold in the morning.

"22, Sterzing; exceedingly cold; snow above and below us.

"23, Pass of the Brenner in a snow storm; bitterly cold; mountains deep in snow, above and

below us; arrive at Innspruck; banks covered with anemone hepatica, red, blue, and white.

"25, Leave Innspruck in a storm of snow; mountains all shrouded in snow.

"27, Augsburgh; cold rain; asthma all night, not having before suffered from it, since I left England.

"May 1, Frankfurt on the Mein; warm and pleasant; packed away our cloaks and dressed in blouses.

"15, Enter France; very cold day; slept at Cassel; snow three or four inches deep.

"18, Arrive in London; cold; fires most acceptable.

"22, Very cold, thermometer 50° at noon.

"June 2, ditto ———————— 55°! ditto.

"3, Respiration very distressing in the night from fog.

"4, Disturbed night from cough.

"7, Change of weather! fine day; thermometer 60° at noon.

"8, Leave for beautiful Italy."

This is the kind of weather which many invalids may report in returning home too early to England.

At Canterbury we met with Lady ——— and her party, who had left Rome within two or three days of ourselves, and had chosen the route by the Simplon. They were delayed three days on the mountain, their horses dug out of the snow, &c. A most unpropitious termination to a winter in Italy for a person with delicate lungs!!

If the holy week be late, the journey homeward is deferred; but if it be in March, the route is commenced in the midst of cold weather, which increases as they proceed.

A gentleman came to Naples in the autumn of 1838, committed to my care by an eminent London physician. He had spent the preceding winter at Torquay, where he had undergone very severe discipline from blisters, and other counter-irritants, with very little benefit. He had suffered from slight spitting of blood, and mucous expectoration. The chest had been explored by the stethoscope, and no tubercular disease discovered. He arrived at Naples in November. He passed through the winter wonderfully well; the cough ceased, the expectoration was stopped, there was no tinge of blood, and he gained flesh, and strength, and appetite, and was in every respect progressing quite satisfactorily, even to having attended one of the balls at the accademia. In the spring he began to be restless about returning home, and started by the first steam boat in April, for Leghorn and Florence. He encountered bad weather, as the equinoctial gales prevailed, and found it very cold in Florence. The spitting of blood, which had ceased for many months, returned; he reached England before the summer, and died in August!

Another gentleman, under precisely the same circumstances, was sent to me by the same physician. He had no tubercular disease. He had accompanied the preceding gentleman to Torquay

the winter before; passed through the same discipline, and was subjected to the same severe treatment by counter-irritation; he had mucous expectoration streaked with blood, and an irritable throat. He progressed quite satisfactorily through the whole winter; the expectoration ceased; he gained flesh and strength, and was able to use horse exercise. He was urged to remain a summer in Italy, instead of returning to England; he did so. No spitting of blood returned; he passed the summer at Naples, went the next winter to Rome, married, and is in perfect health. He has determined to reside in Italy.

In cases like these, in which there is irritable mucous membrane, and laxity of the vessels tending to hæmoptœ, or in which it is feared that tubercular disease is in the course of development, it is not sufficient that the patient escape the severity of one northern winter; much more than this is necessary. The invalid should not return home till sufficient time has elapsed to ensure him from the recurrence of former symptoms; till the vessels have acquired sufficient tone to prevent their again giving way. A warm climate draws the current of the circulation to the surface, reduces the quantity of the circulating fluid by free perspiration, and thus gives time to the diseased vessels to contract. A marine and exciting atmosphere stimulates the lax and irritable mucous surfaces, and induces a state of the system, tonic and healthful; and if the new condition of the circula-

tion be only sufficiently established, the malady is removed, and probably will not return. To effect this change one winter will not suffice; the patient should avail himself of the advantages of the southern summer, and not return to his country till the succeeding spring. The towns in the vicinity of Naples, as Castellamare, Vico, Sorrento, Massa, Amalfi, or La Cava, would either of them form a good residence for an invalid during the hot months; or he may visit the baths of Lucca after passing the early part of the summer at Florence, to which latter city he may return during the months of September and October, and may afterwards spend the winter at Rome or Naples, of which places, the atmosphere of the former is more soft, while that of the latter is more tonic; and then return homewards in the ensuing month of May.

How different is the condition of the animal system in a warm country from that in our own land! In the former, the body is in a uniform temperature for many months; the circulation is determined to the surface; the perspiration, especially in persons recently arrived, is very great; the lungs act freely, unchecked by any sudden change of the thermometer, which is subject to a variation of ten degrees only, in the scale at midday for four or five months. The food consists chiefly of a vegetable character, the wines of a light and unstimulating kind, and in the mineral waters of the bay of Naples, will be found various

available remedial agents beneficial in many diseases.

To recapitulate, then, these two evils ought to be avoided in all cases of irritable larynx, and lungs, with hæmoptœ, or threatened tubercular disease, for which change of climate is sought.

1st. That of returning home before the improvement in the health is confirmed by such invigoration of the system as time only can effect.

2. Travelling homewards before the summer has commenced, and thus encountering cold wintry weather in mountain passes, a state of atmosphere in most injurious contrast with the warm climate of the South. The summer is not fully established in England before the end of June, or the beginning of July, the mean temperature at which time is about 65^0, corresponding with that of Naples in May, which is 66^0.

WHAT ARE THE DISEASES BENIFITED BY THE CLIMATE OF NAPLES?

Certainly not Consumption in its latter stage, when fully developed! Who would send a friend with hectic on the cheek, purulent expectoration, emaciated frame, and the other fatal symptoms of an incurable disease, from the comforts of home, to prolong a hopeless contest with death in a foreign land, remote from the soothing attention of friends, and the consolations of religion? These are not the cases for Rome or Naples.

But there are many forms of bronchial phthisis in which the air of Italy effects great relief, and even removes the disease. Where severe bronchitis has existed, succeeded by continued cough, with suspicious expectoration, tendency to hectic fever, but with the chest tolerably free on percussion; mucous rattle without pectoriloquy, and no emaciation, in such cases the air of Italy often effects wonders.

In the winter's cough of old persons, with great bronchial irritation, the effect of the air of Naples is also most beneficial.

In cases of hæmoptœ, where has pre-existed irritable mucous membrane, only with slight hæmorrhage from the lungs or throat, and emaciation, such cases, indeed, as have been treated for consumption with severe and depressing remedies, the air of Naples is most specific. In cases of hæmoptœ with tubercles, or in hæmoptœ of an active kind, the air is too stimulating to effect more than a transient benefit.

Where there has been reason to fear incipient tubercular disease, manifested by slight hacking cough, with dullness on percussion over some part of the chest, tested by auscultation, and the general health delicate and languid, in such cases the pure marine air of Naples often dissipates the bad symptoms, and restores the health.

In those persons who suffer from bronchial irritation, associated with disordered health, from residence in hot climates, with biliary obstruction,

and yellowness of the skin, Naples is a most desirable winter's residence; where the mineral waters of Castellamare are at least equal to those of Cheltenham, or even superior to them.

In some cases of humoral asthma it is very useful; while in other form of asthma the atmosphere is objectionable, and the air of Rome is more salutary.

In dyspeptic cases, of various grades and forms, Naples is usually beneficial; as also in hysteria, and hypochondriasis, with nervous debility, and depression of spirits; but when the latter symptom occurs in full and plethoric habits, its climate is too stimulating.

In many cases of neuralgia, especially those of rheumatic origin, the uniform temperature and tonic atmosphere of Naples in summer, are exceedingly useful. A lady who suffered severely from tic douloureux, was quite free from it, while she remained there.

In children suffering from scrofula, in whom the climate of England is constantly predisposing them to tracheal, or pulmonary inflammation, having enlarged tonsils, and irritable lungs, with a tendency to obstruction of the mesenteric glands, and general strumous predisposition, the dry marine and electro-tonic atmosphere of Naples acts as a charm.*

* To the children of Indians, born of native women, Naples would be an excellent place for education. The mortality of children sent from India to England is grievous; but Naples,

The air of Naples is injurious in many gouty cases in which it is too stimulant, That of Rome is justly considered preferable.

There are many cases of rheumatism in which the baths of Ischia are very beneficial; and the invalid can select a mild retreat in Italy without endangering a relapse by returning to a cold climate, and Naples is a very desirable place of residence for this purpose; although the patient should be doubly cautious in the month of March not to expose himself to sudden transitions, such as are liable to occur by walking briskly in the hot sun, and then riding in a carriage in shady parts of the city, &c. Persons often suffer in hot weather by incautiously passing through the grotto of Posilippo, the cold atmosphere of which exerts a most repressing influence; the danger is greatly diminished in the winter or spring months, because the atmospheric temperature at these seasons invariably approaches the mean of the place, as is the case with all grottos. From the same cause, churches, which are always closed, are cool in summer, and warm in winter. The benefit of the baths of Germany is often also counteracted by returning over Alpine passes, or by the setting in of wet weather in the climate of Germany, where

with a climate intermediate between that of India and England, is peculiarly congenial to the constitutions of children; has most ample resources for education at moderate expence: and the length of voyage is reduced by route of Suez by a distance of 1200 miles.

the autumn is very cold and damp. A gentleman, who had suffered from severe rheumatic complaints, spent the autumn at Wiesbaden, and, by the use of baths there, was much benefited. Returning to Italy through the Tyrol, in the month of November, the snow had accumulated to such an extent as to obstruct the carriage. He was compelled to get out, and remain a considerable time in the snow, directing the proceedings, till the impediments were removed. The result was, that his malady returned with increased violence, and all the advantage received from the baths was counteracted.

The constant influence of a climate so stimulating as that of Naples, tends greatly to increase the general irritability of the system. To those who come only as occasional visitors this is less obvious; but, after living two or three years there, it becomes very evident. Our countrymen pursue their usual mode of living, instead of adopting the habits of the country in which they reside: they take a large proportion of animal food, and drink the strongest wines, in their accustomed quantity; hence, after being a few months exposed to the climate on this uncongenial diet, they are frequently attacked with fever, and sometimes with phrenitis. It is perhaps preferable to adopt, in some degree, the customs of the inhabitants of the countries in which we reside; and, in this instance, to take a larger quantity of vegetable, and less of animal food, and to reduce the quantity of

stimulant. The wines of the country are light and pleasant, and equally innocuous; and it is only when brandied for the English palate that they should be taken with caution. The wines of the kingdom, the quality of which by increased attention to their manufacture is annually improving, are very various; and those of Somma, of Vesuvius, Capri, Monte di Procida, and Sicily, are, when fermented and in good order, excellent in flavour and wholesome in character. When the influence of the sun on the atmosphere ceases, a portion of the moisture held in the air is precipitated; hence, as soon as the sun descends below the horizon, a sense of dampness and chilliness is immediately apparent, which the natives are very careful to avoid, as prejudicial to health. Of this, too, our countrymen should be warned, for it is curious to observe how exclusively the public walk of the Villa Reale, between the hours of four and five, in the winter months, is filled with English, although their pendent tresses and chilly aspect sufficiently manifest the dampness and unwholesomeness of the atmosphere. Recently arrived visitors suffer occasionally from coup de soleil, from incautious exposure of the head, to its rays. Nor is this effect peculiar to the middle of summer, as it is not uncommon in spring, when the power of the sun in proportion to the general temperature is already considerable. Thus, in March and April, the sky is clear and unclouded, and the thermometer in the sun at mid-day often ranges

as high as 85° or 90°, although the mean temperature in the shade, it is but 60°. Imprudent exposure of the head to the sun's rays under these circumstances, may produce serious mischief, and especially if the individual be in a state of excitement and predisposed to disease by the too frequent indulgence in spirituous drinks; and in this way strangers frequently suffer from an attack of phrenitis, which is referable alone to their own imprudence.

The course of fever is much modified by climate, and in that of Naples it is curious to observe how accurately the descriptions of the old man of Cos apply, at the present day. These fevers most frequently run a course of twenty-one days, but are subject to the influence of critical evacuations produced by nature or by art, on certain other critical days, to which the historical account of fevers by the older writers, as Galen and Hippocrates, strictly apply. Although not so well marked in our own country, they are here strikingly evident, so much so indeed as to excite in the mind of the physician continual admiration of the accuracy and graphic description of the father of physic. The fevers are also distinguished by the want of power, which is usually apparent in this disease; the patients bear but moderate depletion, they admit of general blood-letting very rarely, and of purgatives only of a mild kind. They are best treated by antimonials, by mild diluents, and simple diet. The powerful antiphlogistic treat-

ment often pursued and sometimes necessary in England is here inadmissible, excepting in new and occasional visitors, in whose cases, the most severe treatment is required. In the Exanthemata these observations apply with still greater force, and in the latter stage of small pox, a drastic purgative will sometimes destroy the patient, a grain of calomel and five or six of jalap having been found to produce a degree of depression of the vital powers not easily counteracted. The malaria fevers, which are produced in those who imprudently indulge in the diversion of shooting in the Pontine marshes, or other malaria districts, assume either a typhoid, remittent, or intermittent type. The continued and remittent forms, are characterized by great depression of the vital powers, either proving rapidly fatal, or, if mitigated, leaving behind them various forms of visceral disease of a serious character. The intermittents are more tractable, but very severe. The inflammatory diseases, although very common, exhibit no great intensity; hence they are more easily subdued by small general bleedings, or local depletion, than those of our own country. The effect of tartar emetic in inflammations, although very striking in England, is infinitely more so in the country of Tommasini and Rasori. The cutaneous perspiration being very great, its sudden suppression under the influence of cold, is constantly followed by disease. Tartar emetic acts, therefore, not only through its depressing power in reducing excessive action,

but also by restoring the suppressed perspiration; hence the antimonium tartarisatum and ipecacuana, are most valuable remedies in this country, and mild diluent and demulcent remedies, supply the place of more violent means. Persons who have resided in Italy during a few years only, will not bear much mercury; in some cases it has a very exciting influence, producing a state analogous to fever, in others it causes great debility. Calomel is too acrid a medicine, as an aperient, and if mercurials be at all necessary, blue pill in small doses, or hydargyrum cum creta, are far preferable. Children, especially, are injured by mercurial purgatives. It is not uncommon in cases of syphilitic disease, to be obliged to stop the course of mercury two or three times, on account of the fever induced by it. A vast number of cases are treated as syphilitic which in England would not be admitted to be so; and consequently many patients are mercurialised in which the modern British surgeon would never think of administering the remedy, or, more correctly speaking, the poison. But on this subject, the scientific views of British surgeons appear to have extended but a short distance on the continent, and certainly have not crossed the Alps. Some persons have an impression that in a foreign country it is better to be treated by a native physician than by their medical countrymen, forgetting that their own constitution is perfectly different from that of the natives, unless it has become acclimatised by long residence. Now even supposing that the science

of medicine had made equal advances in the two countries, which we are not disposed to concede, yet the Italian physician is in no better degree qualified to take charge of the health of the English recently arrived in Italy, than the English physician would be best fitted to prescribe for the Italian, just arrived in England. The constitutions of each are peculiar and different, the English patient admitting and requiring more active means than the Italian constitution would bear, or the Italian physician would practice. Hence, although in persons who from long residence have become acclimatised, the practice of the well educated foreign physician, may be better adapted to meet the exigences of disease than that of the recently arrived British practitioner, yet it is only in those who have a constitution assimilated to that of a native, that the native practitioner would be justly entitled to a preference. Lord P. arrived in Naples early in the autumn, he exposed himself to the hot sun, while pursuing his English system of diet. He was attacked with great determination of blood to the head, nearly amounting to phrenitis, with congestion of the liver, his eyes red, and suffused with bile, and his circulation strong and rapid. He resorted to an Italian physician, who applied a few leeches, and gave gentle aperients; the nobleman died. The physician treated the disease as he would have done a person of Italian constitution. Free blood-letting and mercurial purgatives would probably have saved his life.

CHAPTER IV.

MINERAL WATERS OF NAPLES AND ITS NEIGHBOURHOOD.

Naples itself possesses mineral waters which are in high repute, and which are resorted to by a great number of invalids, who assemble within and around the neighbourhood of the city. They are the

Acqua Solfurea di Santa Lucia, and
Acqua Ferrata di Pizzo-falcone.

The Acqua Solfurea di Santa Lucia is a simple sulphur water, analogous to the water of Moffat. It has a limpid sparkling appearance, with a smell of decomposed animal matter, and containing sulphuretted hydrogen gas, depositing sulphur on exposure to the air. It is rather lighter than distilled water, and has a temperature of 64°, 4 of Fahrenheit. It issues from the Tufa rock on the shore at St. Lucia, near the Castello del' Uovo, and very nearly at the level of the sea. It is much neglected excepting in the months of June, July, and August, which is the season for frequenting it. It is to be deeply regretted that this spring is not more carefully protected, and that it should be allowed to be surrounded with dirty and disgusting objects.

ACQUA SOLFUREA DI ST. LUCIA.

Sp. gr. less than distilled water. Temp. 64°,4.	Taste of sulphuretted hydrogen, slightly. Smell of decomposed animal matter. Color, clear, limpid, transparent.

Ingredients in a pint of water. Analysed by Ricci.*	Acqua Solfurea.	Analogy water of Moffat.
	Cubc.Inches.	
Carbonic acid gas.....	5,47	
Sulphuretted hydrogen gas.....	,99	
	Grains.	
Sulphate of soda.....	0,013	
Muriate of soda.....	0,050	
Carbonate of soda.....	0,045	
———— lime.....	0,063	
Silica.....	0,003	
Oxides of iron and of manganese, with minute traces of iron.....	traces.	
	,174	

This water is slightly diuretic, and aperient; it is much esteemed by the Neapolitans, and taken almost universally in cutaneous diseases, to purify the blood.

Its medium dose is three pints, taken early in the morning, fasting.

* Analysi chimica dell' Acqua Ferrata e Solfurea di Napoli eseguita di Giuseppe Ricci.

ACQUA FERRATA DI PIZZO-FALCONE.

On the western side of the point of the hill of Pizzo-falcone, near the Castello del' Uovo, and under the road, is a cavern in the Tufa rock, close to the sea. At the bottom of the cavern, and at the level of the sea, is the spring of the chalybeate water of Pizzo-falcone. It rises in considerable abundance, and the cavern is filled with carbonic acid gas. The water has a brisk and sparkling appearance, and a decided chalybeate flavour, and is rather pleasant to drink, especially with wine. It has a temperature of 68° of Faht. and is very analogous to the water of Tunbridge, but contains a larger portion of free carbonic acid gas. The well is closed, excepting during the summer months, at which time persons flock in great numbers, early in the morning, to drink the waters from the spring. It has been discovered many years, and its reputation is very far extended throughout the kingdom. It has also been analysed by Professor Ricci, who gives the following results :—

ACQUA FERRATA DI PIZZO-FALCONE.

Sp. grav. 1002. Temp. 68°.	Taste, brisk and metallic. Color, clear and transparent. Smell, none.	
Ingredients in a pint of water. Analysed by Ricci.	Acqua Ferrata	Analogy water of Tunbridge.
	Cubc. Inches.	
Free carbonic acid gas.....	6,956	
Carbonate of soda.....	0,075	
——— lime.....	0,055	
——— magnesia.....	0,001	
——— iron.....	0,045	
Hydrochlorate of soda.....	0,093	
Silica.....	traces.	
Iodine.....		
	,269	

The medium dose is three pints, taken in the morning, fasting, at separate intervals, with exercise between each glass; and it is well to employ sea bathing during the course.

The Acqua Ferrata is a light tonic, and is recommended in those cases in which a chalybeate is desirable.

ACQUA DI BAGNUOLI.

Acqua Bagnuoli is a mineral water on the shore of the beautiful bay of Baiæ, about two miles from Naples, in passing on the road to Pozzuoli, through the grotto of Posilippo. The spring has long been celebrated for its medicinal and thermal virtues, and its reputation is well merited. It is the first of the extreme series of thermal springs we shall have to notice, and in common with those of Ischia, contains a considerable proportion of saline ingredients, of which the carbonate and muriate of soda are in greatest quantity. The carbonate of soda forms a very valuable ingredient in thermal waters, rendering them grateful to the skin, from the surface of which it tends to remove all extraneous matter, and thus facilitates the function of transpiration, and renders it more suitable for the absorption of other medicinal substances. The baths of Bagnuoli would be invaluable if they were nearer Naples, the distance being a great objection to their employment. They are used for obstinate rheumatic affections, for hemiplegia, for nervous and syphilitic pains in the limbs, &c.

ACQUA DI BAGNUOLI.

Sp. grav. 1004,63. Temp. 107°.	Color, clear and transparent. Taste, slightly acid and saline. Smell, not perceptible.

Ingredients in a pint of water. Analysed by Cassola.	Acqua Bagnuoli.
Free carbonic acid gas	2,9028
Azote	,378
Oxygen	,002
Bi-carbonate of lime	1,2487
——— soda	9,3400
——— potassa	0,8125
——— magnesia	0,2619
——— iron	0,0044
——— alumiua	0,5625
Sulphate of soda	5,1742
——— magnesia	0,5486
Hydrochlorate of soda	10,7640
——— lime	0,8750
Silicate of soda, or of potassa, containing 4,5 of silicic acid, held in solution by carbonic acid, and which is precipitated in the state of silicate of alumina by boiling in water in union with the sub-carbonate	1,1250
Oxide of manganese in the state of bi-carbonate	traces.
Alumina, silicic acid and oxide of iron	ditto.
Hydro-bromic acid	ditto.
Vegetable extract	———
Loss	———
	31,7499

It is taken internally, in doses of two or three pints a day, in gravel and in nephritic disorders.

At the Lago d' Agnano are Stufe of a high temperature, called the Stufe of San Germano; which are occasionally used for obstinate rheumatic and paralytic complaints; and there can be no doubt that if a proper establishment were erected, and conveniences provided for the use of invalids, they might be made exceedingly beneficial.

The Stufe of San Germano, Acqua Bagnuoli, and other Thermal waters around the Solfaterra, are probably all resulting from volcanic action operating below the surface. The fire of the Solfaterra still smoulders; the heat of the Grotto del' Cane, and the evolution of carbonic acid gas there, are only other parts of a similar series of actions, all arising from the same cause, and probably all communicating with the subterranean crater of Vesuvius.

ACQUA DE' PISCIARELLI.

This water rises in the crater of the Solfaterra, between Lago d' Agnano and Pozzuoli. It is a highly curious and important mineral spring, and is of great use in some maladies requiring astringents. It is of a harsh and styptic taste, and of a very astringent character. It is used by the poor women in the neighbourhood for leucorrhea, blenorrhea, and hæmorrhoidal discharges. It is taken internally in passive hœmorrhages, in diarrhea, and dysentery. It is also used as a gargle in sore throat, and ulcerations of the mouth. It contains the following ingredients.

ACQUA DE' PISCIARELLI.

Sp. grav. Temp. 156.	Smell, strongly of decomposed animal matter. Color, whitish. Taste, astringent.
Ingredients in a pint of water. Analysed by Professor Vulpes.	Grains.
Sulphuretted hydrogen gas.....	1,464
Free sulphuric or sulphurous acid.....	7,323
Acid sulphate of alumina	21,969
Sulphate of iron.....	5,126
———— lime.....	12,449
Alumina.....	3,661
Loss.....	,732
	51,260

The quantity of sulphates in this extraordinary mineral water point out its astringent properties. It has scarcely its parallel in Europe. It is an important remedy in hœmoptœ, in chronic diarrhea, in atonic hœmorrhages, in leucorrhea, blenorrhea, and other diseases of debility, both internally and used as an injection.

ACQUA SUBVENI HOMINI.

This name is corrupted by the populace into Zuppa d'uomini. It is found near Pozzuoli, and has in temperature and composition, great similarity to the water of Wiesbaden; it is, however, clear and limpid, while the latter is red, and stains the skin. The shores of the bay of Baiæ are so enchanting and picturesque, that it is to be regretted that there are no accommodations for the employment of this valuable mineral water. Happily the waters of Ischia are very similar in composition and temperature, and will therefore probably supersede the Acqua Subveni Homini.

ACQUA SUBVENI HOMINI.

Sp. grav. 1010. Temp. 103.	Color, clear and transparent. Taste, saltish. Smell, none.	
Ingredients in a pint of water Analysed by Lancelotti.	Acqua Subveni Homini.	Analogy water of Wiesbaden.
Temperature	103°	158°
	Grains.	Grains.
Free carbonic acid gas	4,342	6,000
Hydro-chloride of soda	44,566	44 225
——— lime	5,263	5,486
——— magnesia	5,149	0,790
Carbonate of lime	,700	1,650
——— magnesia	,600	———
——— iron	,700	0,078
	56,978	52,229

This water is used as a bath in chronic rheumatic affections, in lumbago, and sciatica; also in stiffness of the joints, in gout, in herpetic diseases of the skin, and scrofulous disorders.

It is taken internally, as a mild aperient and tonic, in dyspeptic diseases, in gouty diathesis, in visceral obstructions, in constipation, &c.

CHAPTER V.

MINERAL AND THERMAL WATERS OF POZZUOLI.

The town of Pozzuoli is situated on the lovely bay of Baiæ, about two miles beyond Bagnuoli; the view being bounded on the east by the hill of Posilippo and the island of Nisida, and on the west by the bold promontory of Misenum and island of Procida; beyond which, Ischia is seen in graceful form rising from the sea. This town contains many interesting antiquities; an Amphitheatre in fine preservation, and other interesting relics of former years. But the most valuable of all, and that which has excited especial attention among Geologists as well as Antiquarians, is the beautiful Temple of Serapis; many of the columns of which are still standing in their place, some entire, others broken off at various lengths, and lying prostrate on the floor. These columns to a considerable height have been perforated by marine animals, proving that since the completion of the temple, it has been partly submerged many feet below the sea; and that it has been again upraised to its present level:—the floor of the temple being now rather below the level of the sea. Nor is this the only proof of the changes which have taken

place in the face of this interesting country, within comparatively recent times. A little beyond Pozzuoli is the Monte Nuovo, a conical hill, which was entirely raised in the space of a few hours, in the year 1538; and the volcanic character of all the surrounding country fully attests the mighty energy that has been exerted there:—and the promontory of Misenum stretches its bold outline as if in contempt of the power which had changed the face of the lower lands around.

But we must return to the mineral waters of the temple of Serapis. These are of two kinds; Thermal, and Cold. To the first class belong the

Acqua dell' Antro, and the
Acqua della Macchina.

The cold springs are named the

Acqua Media, and the
Acqua dei Lipposi.

The thermal springs of the temple of Serapis are similar to each other in composition. The following analysis has been made by Professor Lancelotti:—

THERMAL WATERS OF THE TEMPLE OF SERAPIS.

ACQUA DELL' ANTRO.

ACQUA DELLA MACCHINA.

Sp. grav. 1008,3. 1004,6. Temp 106°.	Color, clear and transparent. Taste, slightly saline. Smell, none.	
Constituents in a pint of water. Analysed by Lancelotti.	Acqua dell' Antro. Acqua della Macchina.	Analogy Tœplitz.
Free carbonic acid gas.....	———	———
Carbonate of soda	11,225	12,240
——————— lime		0,340
——————— magnesia	2,999	———
——————— iron	530	0,036
Sulphate of soda	4,516	1,696
——————— lime	0,250	———
Hydrochloride of soda.....	9,567	0,776
——————— lime	———	———
——————— magnesia	———	———
——————— alumina.....	———	———
Silica	0,060	0,424
	29,147	15,538
Temperature.....	106°	122°

The thermal waters of the temple of Serapis are used in the same class of cases as the preceding Acqua Subveni Homini.

The cold mineral waters of the temple of Serapis are also useful: they are the Acqua Media, which resembles the Acqua Media of Castellamare, and the Acqua dei Lipposi.

COLD MINERAL WATERS OF THE TEMPLE OF SERAPIS.

ACQUA MEDIA.

ACQUA DEI LIPPOSI.

Sp. grav. 1004,6. Temp. 90°.	Color, clear and transparent. Taste, slightly saline. Smell, none.		
Constituents in a pint of water. Analysed by Cassola.	Acqua dei Lipposi.	Acqua Media.	Analogy water of Ems.
	Cubc. Inch.	Cubc. Inch.	Cubc. Inch.
Free carbonic acid.....	4,342	2,5000	4,000
	Grains.	Grains.	Grains.
Chloride of soda	24,716	18,1490	8,000
Carbonate of soda.....	10,690	2,4597	10,000
——————— lime	1,115	1,1250	1,140
——————— magnesia....	1,864	1,9687	2,000
——————— alumina	———	———	
——————— iron.....	———	———	0,062
Sulphate of lime.....	———	———	
Silica	2,125	1,1673	
	44,852	24,8697	21,202

The Acqua dei Lipposi is used principally as a collyrium for weak eyes, although it does not appear what are the constituents which so peculiarly adapt it for such cases. The Acqua Media is taken internally in cases similar to those in which the Acqua Media of Castellamare is used.

The neighbourhood of Pozzuoli is defended from the cold winds of spring, but is subject to malaria in autumn.

There is great analogy between the Acqua dei Lipposi and the water of Ems in Nassau.

Still farther on the road to Baiæ, and beyond Avernus and the Lucrine Lake, are the Stufe, called the Baths of Nero. A cavern on the side of a hill, contains these remarkable Stufe. An antechamber of moderate dimensions leads to several inner small chambers in the rock, which were formerly used for baths. A long narrow passage from the antechamber, filled with hot vapour, conducts by a steep ascent to the spring, which is of very high temperature, amounting to at least 180° of Fahrenheit. An egg placed in the water is quickly cooked. The passage and the chambers are filled with vapour almost too hot to bear, producing the most copious perspiration on those who enter. Persons often take cold by exposing themselves suddenly to the external air without additional clothing, after having visited these baths.

These are the principal mineral waters which exist in Naples and its neighbourhood. In this short circuit are found waters of different composition, Sulphurous, Chalybeate, Aluminous, Saline, Alkaline, and Acidulous; of temperatures varying from 60° to 180° of Fahrenheit. These varied springs are found in a country of the most picturesque character, of a climate exceedingly delicious, and in situations full of classic and scientific interest.

The theory of the production of mineral waters is still incomplete. That volcanic energy produces various decompositions, and effects the solution of various metallic and earthy Oxides in the water

which traverses the crust of the earth, no one can doubt: and it is evident that the composition of the various waters that have been described, is due to this action, since they all occur in a country eminently volcanic, and most of them in the immediate vicinity of a volcano. Doubtless these various combinations may be produced by other causes, since there are many springs of a highly mineralized character in countries where there are no other marks of volcanic agency, and the influence of galvanic power is quite sufficient to produce these phenomena. The alternation of metallic beds or veins, with other substances, percolated by water, may be sufficient to constitute a most powerful galvano-electric series, adequate to the production of any effects in the formation of mineral waters; causing the intimate union of various metallic, alkaline, or earthy salts, and their equable diffusion through water, by a continued and steady action.

A power of this kind would be very efficient to ensure that uniformity of composition, which is not one of the least extraordinary of the phenomena of mineral waters; for not only are the waters of a particular spring always mineralised, but always in the same proportion; excepting that after rains they may be somewhat more diluted.

We have pointed out the remarkable analogy of those waters we have described, to some of the most celebrated waters of Germany, and elsewhere; with the advantage in favour of those of the bay of Naples, that the proportion of saline ingredients

is usually greater; probably from the vicinity of the sea, and the abundant supply of saline matter, which is decomposed, or re-arranged, so as to form a new and different compound.

In the tables of the analysis of the different springs the analogy is pointed out, and the proportions usually given, for the sake of more easy comparison.

THE FOLLOWING IS A SUMMARY OF THE WATERS ALREADY DESCRIBED, AND THEIR ANALOGIES.

	Analogous to
Acqua Solfurea St. Lucia....	water of Moffat.
——— Ferrata ditto.....	——— Tunbridge.
——— Bagnuoli.....	——— Seltzer.
——— Pisciarelli	——— quite unique.
——— Subveni Homini.....	——— Wiesbaden.
——— Media—Temple of Serapis	——— Media Castellamare.
——— dei Lipposi ditto.....	——— Ems.
——— dell' Antro ditto..... ——— della Macchina ditto	——— Tœplitz.

The use of mineral waters has been estimated more highly of late years than ever; and the various springs of England and of Germany have, either from their reputation or from fashion, been annually crowded with visitors.

There can be no question that those combinations we meet with in natural springs, have a far greater effect on the constitution, than the artificial mixtures which are called "factitious waters;" although Dr. Struve and others have in many instances

succeeded in producing admirable imitations. But these are but approximations to the qualities of the real springs; and that, for the following reasons:—

1. That it is exceedingly difficult, even by the most scientific analysis, to arrive at certainty respecting the ingredients of any mineral water. The process of analysis so alters the form, and modifies the combinations, of the saline matter, that it is very rarely that we arrive at a perfectly satisfactory conclusion, and two Chemists of equal eminence will give very different results as to the composition of the same mineral water.

2. The saline and earthy ingredients appear to exist in some more intimate chemical combinations than that of mere solution; and as the composition of the mineral water was probably effected by the long continued agency of the cause, (whether volcanic or electric,) so the union of the principles may, by this means, be rendered more complete, the attraction more intense, and the affinities even different and varied, from what they would be under extemporaneous mixture in the laboratory.

As, therefore, we are far from having arrived at certainty respecting the actual composition of a mineral water, as it exists in the spring, so shall we experience much difficulty in manufacturing a similar fluid, with all the constituents arranged in the same manner, and in the same proportions. The laws of affinity are strangely modified by circumstances; although we think we have learned the general principles by which they are governed.

That the effect of mineral waters on the constitution is dependent upon something more than the mere chemical composition, as shewn by ordinary analysis, is proved by the fact that there are some waters that have an operation upon the system, very different or disproportioned to the character or quantity of the saline constituents. They act not merely by the immediate sensible impression on the system, but by the slow and gradual change on the circulating fluid, and by the introduction of substances into the circulation, in small proportions, and infinitely divided, which thus are gradually diffused through the whole mass of blood, although their curative effect may not become immediately manifest. After having been persevered in for some time they produce some degree of feverish excitement, followed by a general action of all the emunctories of the body, which usually exhibits a striking effect upon the malady.

This excitement is usually moderate, and often ineffectual; but if the critical evacuations (if I may so speak) do not take place, it may become excessive, requiring the interference of the physician. Happily it is in general easily subdued by the use of a tepid bath and a dose of mild aperient. But sometimes it is treated actively as idiopathic fever, in which case the curative effect of the waters is either temporarily interrupted, and may be entirely prevented. Or if the evacuations do not take place from the various excretory organs, then the general excitement is injurious, instead of curative. This

has arisen most frequently in consequence of inattention to the regulations enjoined as to the mode of taking the waters, and also as to diet. Some persons are not content, unless they experience an immediate and powerful effect from the course of mineral waters, and imagine that they may bathe in, daily, and imbibe large quantities of a fluid perhaps of high temperature, variously impregnated, with impurity; although in fact they often cause a degree of fever which is really alarming. The effect of the repeated use of the warm bath, is to produce a great degree of susceptibility to any material change of temperature. Hence it not unfrequently happens that after returning from the thermal springs of Germany late in the season, the circulation is suddenly thrown upon internal parts, and apoplexy, paralysis, or some serious internal malady is produced; and although the disease, for which the course of waters and baths was employed, may be relieved, yet by such imprudence a much more serious malady is often caused in its stead, which is not so easily removed.

In pursuing a course of mineral waters, then, it is desirable to commence with such quantities as the constitution of the patient, and the nature of the malady, may appear to require; and this can only be decided by the experienced physician, who is well acquainted with their action. The patient must not be dissatisfied if he perceive no immediate, or only a slight, effect from the course; let him but steadily persevere, carefully adhering

to the proper system of diet enjoined, and to the exercise which is equally essential, and doubtless he will experience, in due time, all the benefits of which the disease is susceptible, or the remedy is adequate to produce.

These observations are strongly applicable to waters of high temperature, such as Carlsbad, Wiesbaden, Gastein, Ischia, &c.

ISCHIA.

CHAPTER VI.

GENERAL DESCRIPTION.

The island of Ischia is one of the most interesting spots which can be visited by the traveller. The beauty of its position and scenery, the softness of its climate, the fertility of its soil, and the wonders of its geological structure, render it an object of universal admiration. The botanist and the geologist will find in it unceasing sources of pleasure and gratification; and the physician will be able to investigate the properties of medicinal springs, of great efficacy and extraordinary variety in temperature and composition, abounding in saline constituents and gaseous impregnation, affording a most interesting field for speculation and professional research, and of stufe exhaling the vapor of water and hot air in great abundance, of considerable degrees of heat.

Ischia is situated on the south-west side of the bay of Naples, about twenty miles from that city, and ten miles from the Promontory of Misenum, towards which it extends, and to which, with the

island of Procida, it was, doubtless, originally united. Its appearance is that of a large conical mountain arising from the sea, terminated by a lofty peak, the Epomeo, which forms the extreme summit of the island, 2450 feet above the level of the sea.

This beautiful island is like a lovely garden, covered with vines. It is tempered by the sea breezes from the cold of winter and the heat of summer. The grapes and the figs of Ischia are generally in high estimation. Although the volcano is now extinct, yet Ischia bears the marks of most powerful volcanic action; and the vast stream of lava which flowed from the crater of Cacavelles, on the north-east side of the Epomeo, gives proof of the tremendous power formerly exerted there. The last eruption occurred in the year 1301, the lava of which date is still bare of vegetation, and exhibits an appearance of destruction and desolation which is indeed amazing.

Although there is no open mouth from which fire and smoke issue, as at Vesuvius and Stromboli, yet there is ample evidence of the existence of volcanic action beneath the surface. Hot springs exist of various temperatures up to above 200° of Fahrenheit, as well as stufe and fumaroles, by which hot vapour, of an intense degree of temperature, is emitted from the earth. The sand on the sea shore in various parts is almost too warm to hold in the hand. In bathing in the sea at Lacco, or at Castiglione, if the bottom be scraped with the foot, the sand

will be found too hot to stand on; and everything attests the action of subterranean fire in constant activity. The island suffers frequently from earthquakes, by one of which, in the year 1828, the town of Casamicciola was very seriously injured. The geological structure of the island is eminently volcanic, consisting of lava, scoriæ, and pumice; whence issue the mineral springs with which the island abounds. The soil, which, in some parts more deeply, in others very scantily, covers these volcanic formations, consists of pozzulana, ashes, or argillaceous matter, which has all been cast up from the mountain, and which usually soon becomes competent to sustain vegetation, and affords the greatest fertility to the fig tree, the vines, pomegranates, oranges, lemons, peaches, apricots, cherries, &c. &c. The climate of Ischia is rendered equable by the sea which surrounds it, and by the breeze which gently sweeps over its surface; but in winter it is exposed to storms, from which it is but little protected, as vines and underwood, form the principal vegetation of the island.

It is, however, in consequence of the delightful nature of its climate, distinguished for its botanical treasures. The aloe and the cactus grow wild and luxuriant in the hedges, forming indeed an impenetrable fence between the enclosures. The stem of the aloe rises with its magnificent blossoms to a height of eight or ten feet, and is a most interesting feature of the landscape. The cactus opuntia, or Indian fig, is in such abundance on every rock or

ruin, that it has been proposed to introduce the coccus cacti, or cochineal insect, as a valuable source of profit; and there is no doubt that the experiment would be amply successful. The hill on the left of the road from Ischia to Casamicciola is covered with myrtle, heath, andromeda, arbutus, &c. in profusion; so that the potteries are supplied with those plants for fuel. Various kinds of lily, and amaryllis, are found on the coast; the caper grows wild on the walls, and the woods teem with orchis and ophrys in the greatest variety. The animals which are indigenous are not numerous; there are several species of mus and sorex, but few other mammalia. The quail, the woodcock, and the turtle-dove, are caught in great numbers in spring and autumn, the islands of Ischia and Capri forming halting places for them, in their migrations. There are but few fish of importance on the coast, excepting the tunny, of which there is a fishery off Lacco. This curious fish, the scomber tymnus, enters the bay of Naples in considerable numbers during the spring and summer months. Nets are fixed to a considerable distance from the shore, forming a kind of trap, into which the fish are driven by the fishermen, and are then killed by harpoons. At Palermo, and other places on the coast of Sicily, the tunny are still more numerous; parties are made for the occasion, and the interest produced when a number of fish are enclosed in the nets, the cries of the captors, the struggles of the victims, and the appearance of the sea dyed

with the blood of the numerous captives, foaming with their efforts, produces a scene altogether most extraordinary and exciting.

The Ischiotes were originally derived from a colony of Greeks from Eubœa, which settled in the island and on the adjacent continent of Cumæ, not long after the siege of Troy, A.M. 2820.

Livy states, "Cumani ab Chalcide Euboica originem trahunt Classe qua advecti ab domo fuerant, multum in ora maris ejus quod accolunt potuere. Primo in Insulas Ænariam, et Pitheusas egressi, deinde in continentem, ausi sedes transferre."—Liv. Hist. lib. viii. cap. 19.

Pliny relates that an eruption of the Epomeo occurred which destroyed a town: "Mox in his Pithecusis Montem Eposson cum repente flamma ex eo emicuisset campestri æquatum planitie in eadem et oppidum haustum profundo alio quo motu terræ staguum emersisse." This happened about A.U.C. 270.

The ancient names of the island are of Greek or Phœnician origin. It was called Pithecusa from two Phœnician words* Pithec-as expandens iguem. It was named Ænana quasi Oinaria from the Greek word Οινη unde Οιναριος, pampinosus vitifer; and Inarime quasi Οιναριμη from the same root. By the latter name it is called by Virgil in the Æneid.

"Dat tellus gemitum, et clypeum super intonat ingens.
Qualis in Euboico Baiarum littore quondam

* March: de Attellis.

Saxea pila cadit, magnis quam molibus antè
Constructam ponto jaciunt; sic illa ruinam
Prona trahit, penitusque vadis illisa recumbit:
Miscent se maria, et nigræ adtolluntur arenæ."

The term nigræ arenæ is beautifully appropriate from the sand being black with oxide of iron.

It is a fact worthy of observation that the descriptions of Virgil are not only beautifully poetical but literally and graphically true. Those who have wandered over the Phlegrean fields, traversed the laughing plains of Baiæ, or crossed the stagnant waters of Averno and the Mare Morto, have only to open the 6th book of the Æneid to have a most distinct and accurate description of the scenery as it now exists. The mind of the poet while delighting in the efforts of his imagination, applies them to the objects before him in his walk, and adapts the wanderings of the souls of his departed heroes to the lovely fields he traverses in his meditations.

The present inhabitants of Ischia are a fine, active people; the men strong, athletic, and handsome; bold, enterprising, and intelligent. They are hardy and adventurous seamen, but gay and peaceful in their character, and temperate in their habits. The Ischiote women are much more beautiful than those on the adjacent continent; and their costume is striking and remarkably pretty. They wear a handkerchief of bright colors on the head, applied in different modes, but exceedingly becoming; and at their fetes they

are decorated with neck-laces and ear-rings of great size, and often of considerable value.

As may be supposed, from the various masters to whom it has been subjected, there are several different races on the island. In some of the females the turban and the physiognomy attest their moorish origin ; while others, from the extreme beauty of their profile, claim an ancestry from the ancient Greek. The fate of Ischia has involved it in repeated warfare ; it has been the prey of various conquerors, who have, each in their turn, despoiled and depopulated it. Its castle, situated on a high and projecting rock, was remarkable for its strength ; from which, and the general character of the island, it probably derived its present name from the Greek word Ισχυς. But, although at that point the shore is bold and striking, yet at other parts it is flat and easily approached ; so that the castle could have afforded but an imperfect defence. It was rather used as a refuge for the inhabitants against the attacks of the numerous adventurers, who were tempted to make a descent upon the island by the beauty and luxuriance of its appearance. There is in the neighbourhood of Casamicciola a rock which was excavated with the view to form a retreat for the poor inhabitants, in case of attack from any hostile force. The entrance was made through a hole on the top, access to which was obtained only by means of a ladder, which on removal precluded the chance of discovery. It is only within a very few years that an opening

has been made in the side, and this natural fortress converted into a wine cellar. The view from the hermitage of Saint Nicholas, which is at the summit of the Epomeo, is a most magnificent panorama. The blue waters of the Mediterranean wash the lovely shores of Mola di Gaeta, of Cumæ, of Baiæ, and of Posilippo; while the bold and classic promontory of Misenum stretches its form nobly into the sea. The country on and around this promontory produces the celebrated Monte di Procida wine, which is highly esteemed by the Neapolitans; and the whole of the adjoining land is deeply interesting, both for its geological and its classic history. Here was the spot celebrated for the grave of Misenus.

"Monte sub aeno qui nune Misenus ab illo
Dicitur, eternumque tenet per seeula nomen."

Æneid, lib. vi.

The beautiful fields of Baiæ, formerly thickly studded with villas, are now purple with vines, and picturesque from the classic ruins of fanes and temples, graceful even in decay. The temple of Venus stands close to the shore, an object of unceasing delight to the virtuoso and the painter; and enough of the splendour of former days remains, to mark the luxury and the refinement of the ancient conquerors of the world. Beyond Misenum, the view extends from Monte Circello, Terracina, Gaeta, and Ponza opposite to it.

"Tu quoque litoribus nostris Æneia nutrix
Æternam moriens famam Gaieta dedisti."

The shores of Cumæ, Mondragone, and Garigliano, are bounded in the distance by the summits of the Appennine of the Abruzzi, whence are extended collateral ranges stretching behind Vesuvius even to the cape of Minerva; opposite to which is Capri, at the entrance of the bay of Naples, affording a picturesque object, bronzed by the reflected light of a brilliant sun, and washed by a sea of indigo color; while Vesuvius, grand in outline and stupendous in form, lies like a sleeping giant extended before us.

Ischia and Procida, which doubtless were formerly united,* were probably raised from the sea by volcanic action. It is in allusion to the active state of the volcano of the Epomeo, that the fable originated of Typhon being buried by Jove under the hill of the Epomeo, an honor which is however contested in favour of Etna. Ischia is traversed in various directions by valleys and chasms, the effect of earthquakes. Near the Bagno del' Occhio, and leading up from the valley of Ombrasco, is the valley del Tamburo, a narrow chasm, down which flows a stream receiving many little rills in its course, of various temperatures. This valley, which is nothing more than a rent in the mountain, caused by some powerful earthquake, is but a few feet wide, and extends upwards till it is closed by vast blocks and masses of lava. Vegetation here is exceedingly beautiful; various rare and interest-

* Strabo and Pliny both assert this: the latter states its name was προχυτα "quia profusa ab Ænaria."

ing plants grow on the sides of the chasm; and the botanist may find much gratification in investigating the productions of a place irrigated by streams of hot water flowing down it. These streams are of various temperature; one is so high that the hand cannot be borne in it, another is somewhat cooler, and a third perhaps quite cold adjoining one of a nearly boiling heat. In one spring we hear the noise as of large bubbles constantly rising and bursting, producing a sound somewhat like a blow on a drum.* Of the various character of the springs in this valley we shall hereafter speak more particularly. It may be easily imagined, from the position of Ischia and its small extent, (it being only about five miles in diameter) that the mineral springs for which it is distinguished, which are all of a high temperature, would be mineralised by the same constituents as are found in sea water; and they do in fact all contain a large quantity of the muriate and the carbonate of soda and magnesia, with small proportions of carbonate of lime, or of the sulphates. They differ from each other rather in the proportion of the ingredients than in their variety. The quantity of saline matter in the pint is very considerable, amounting from half a dram to more than two drams. Yet it is not alone from the quantity of saline ingredients that they are distinguished, but also from the intimate union of the constituents, in consequence of long exposure

* Hence the name of the Valley del Tamburo, or "of the drum."

to a high temperature; and the water rises from the springs at a heat far greater than can be used for a bath, some of them being so high as 178° of Fahrenheit, or even higher. Hence it is necessary that it should stand for some hours in reservoirs until it has cooled to a proper degree. The water of Gurgitello is conveyed to Naples at a sufficient temperature for a bath, as the boats leaving Ischia at nine o'clock, arrive with the sea breeze at two.

The baths of Ischia have enjoyed a reputation for more than 2000 years, having been employed for the cure of diseases more than six centuries prior to the time of Hippocrates. Ischia was inhabited by the Greeks before the foundation of Cumæ, which was founded 1050 years before Christ. Hence from some Greek inscriptions found at Ischia, the date of them is referred back 2887 years. Hippocrates was born 460 years before Christ; and Ischia and its springs were, therefore, probably known 600 years earlier than the time of Hippocrates.

The vapor of the stufe or fumaroles differs in no degree from other vapor; and, when condensed, yields pure distilled water. The hot air stufa is atmospheric air, with probably a large proportion of carbonic acid gas. The temperature of the stufe varies from 140° to 180° of Faht; they consist of apertures in the earth, from which vapor or hot air, in greater or less abundance, issues from the soil. They occur at various parts of the island, but a few of them only are now employed

for medical purposes. The temperature at which they are employed as medicinal agents is regulated by the size of the apertures from which the air or vapor escapes, and which are enlarged or contracted for this purpose. A small chamber is built over the fumarole or aperture, which is covered with an earthenware tube, with various holes in it. At the Stufe of San Lorenzo there is a small room adjoining, for the invalid to rest and refresh himself. The effect of these natural vapor or air baths is very powerful; and they are exceedingly valuable as remedial means, but must not be resorted to without due caution or competent advice.

The sand baths are also very important means employed in the cure of various maladies; but they require still more discrimination in their employment. They are situated near the village of Lacco, on the sea shore. A small building is erected over the sand, which is of a Quartzose Ferruginous character, containing a large proportion of black oxide of iron. The temperature is reduced by the addition of cold water, so that the invalid may bear it without inconvenience. The effect is very great, producing profuse perspiration and relaxation of the whole system. It is much to be regretted that these stufe and sand baths are not kept in better repair, and that more pains are not taken to afford every facility for their employment. There is no doubt that if these various baths of Ischia were made available to the full extent of which they are capa-

ble, and kept in complete order and cleanliness, they would be a source of revenue to the kingdom, and of great prosperity to the island. The commercial funds are small, and the people without enterprise; it is, therefore, only by the government itself that any substantial improvements can be effected.

The theory of the production of these stufe is sufficiently simple. There can be no doubt that there is a vast nucleus of volcanic fire at a certain distance below the surface of the island, with which the water of the surrounding sea has some communication. It is scarcely possible to put any limits to the imagination, in reflecting on the prodigious power that may be exerted by such an agent. The evolution of vast quantities of vapor, or hot water, of various temperatures, and of different composition, is nothing to be wondered at under such circumstances; it is only extraordinary that they should be produced so regularly and with so great uniformity of temperature and composition; and yet the analysis of the various waters of the island exhibits no important discrepancy, although made at various periods and by different chemists. How marvellously are the most powerful agents of nature placed under some great and beneficent control, so as to compel order and uniformity, and regularity under circumstances the most difficult, and from agents the most intractable.

CHAPTER VII.

THERMAL WATERS OF ISCHIA.

THERE is no place which affords greater natural facilities for sea bathing than Ischia. Beautiful coves and a gradually sloping beach, with clean quartzose, or black sand, and a deep blue sea gently rippling on the shore, offer every temptation for this agreeable and healthful exercise. The banks are adorned with vegetation and flowers of interesting character; the air pure, tonic, and invigorating. There are no artificial means supplied; but such stillness and retirement reign, as Diana and her nymphs might have delighted in without danger of rude intrusion.

The thermal springs of the island are very numerous, and exceedingly valuable; they have been analysed by Professor Lancelotti, by Cassola, Guarini, and Covelli, and the results are as satisfactory to the physician, as they are honorable to the accuracy of these distinguished chemists. A report was made by Professor Lancelotti to the Academy of Sciences of Naples, on the mineral waters of the island of Ischia, dated 1831; and to the analysis given in this report, I shall have occasion frequently to refer, as also to the work of

M. de Rivaz, which is in fact a summary of it, and constitutes an admirable sketch of the waters of the island.

The most important spring of Ischia, that indeed most employed, and on which the greatest pains have been expended, is the Gurgitello, derived probably from the Greek words γοργος, agilis mobilis, and τελλω, fio. The source of this spring is in the valley of Ombrasco, at the base of the Epomeo. It is distant above half a mile from Casamicciola, a pretty town on the sea shore, which had the misfortune to be greatly injured by an earthquake in 1828. The water is supplied in ample quantity, not only for the use of private baths, but also in great abundance for the baths of a public hospital, called the Monte della Misericordia. This charity receives the poor from different establishments at Naples, affording the use of warm baths to those who suffer from diseases which are likely to be benefited by such remedies. To this establishment about four hundred patients are admitted annually, who rigorously pursue the course of baths recommended by the medical superintendent. There is a large bath-room, containing seventy-six baths, of which ten are fitted up for applying warm doushes to any part of the body; and also a capacious sudatorium, or vapor bath, which is not, however, completed. There are twenty-one private baths, moderately well kept.

The valley is beautiful, and the situation of the baths convenient from its vicinity to Casa-

micciola, and to most of the Casini, which are let to strangers. The water of this spring is somewhat soft and unctuous to the touch, of a saline and rather nauseous taste, clear and transparent, and without smell. Carbonate of lime is deposited in the pipes, and a pellicle of the same substance forms on the surface of the water on standing. There is abundance of carbonic acid gas constantly escaping; hence the name of the spring is supposed by some to have been given from the gurgling noise (gorgogliamento) produced by the rising and breaking of the bubbles. It will, however, be found that almost all the names of the springs, as also of places on the island, are of Greek origin, in consequence of its having been an early Greek colony.

There are also mud baths employed at the establishment of Gurgitello, the temperature of which amounts to 128° of Fahrenheit; but they are not at present so much recommended as formerly. They are constituted of the sediment from the water, which consists of carbonate of lime and other earthy matter. This is not either so cleanly or so beneficial a remedy as the sand baths of St. Restituta, which are indeed very valuable and powerful medical agents. The mud baths are usually taken in the evening, which is rather an inconvenient time for an invalid, who is indisposed from languor consequent on the heat of the day, to resort to the baths for their employment. There is also something repulsive in the idea of a mud bath

which is not easily overcome. Nor is it very clear in what their benefit consists, more than in any other medium of the same temperature. The sand bath is an efficacious and not uncleanly remedy when properly managed, as the sand is of a quartzose ferruginous character, hardly soiling the skin. The water of Gurgitello will be found, both in constituents and in temperature, to resemble the waters of Carlsbad, as will be seen by the table adjoining.

ACQUA DEI BAGNI DI GURGITELLO.

Sp. grav. 1003,76	Colour, clear and transparent. Taste, saline, rather nauseous. Smell, none. Touch, soft and unctuous.	
Ingredients in a pint of water. according to the analysis of Lancelotti.	Gurgitello.	Analogy, Carlsbad. Berzelius.
Temperature, Fahrenheit	158°	167°
	Cubic Inch.	Cubic Inch.
Free carbonic acid gas	9,000	11,400
Hydrochlorate of soda.....	20,4894	7,975
——————— iron.....	———	traces.
Bicarbonate of soda	18,8537	9,695
——————— magnesia.....	,4777	1,370
——————— potassa.....	0,0050	———
Carbonate of lime.....	,6560	10,050
——————— iron.....	———	0,028
Sulphate of soda	0,0100	19,869
——————— lime.....	0,0600	———
——————— iron.....	traces.	———
Fluate of lime	———	0,024
Phosphate of lime.....	0,0010	———
Silica	0,0270	0,577
Manganese, oxide of.....	0,0030	0,007
Iron, oxide of.....	0,0030	———
Alumina and potassa.....	0,0040	———
Hydriodate of potassa.....	0,0200	
	40,6098	49,595

The excess of saline ingredients in the water of Carlsbad, consists in a greater proportion of carbonate of lime, of which there is but a small quantity in the Acqua Gurgitello.

ACQUA DEI BAGNI DI GURGITELLO.

The Acqua Gurgitello is administered both internally and externally. Invalids usually take two or three pints in the morning, with intervals of half an hour between each glass, which are best employed in exercise. The baths must be used under the direction of one of the physicians of the island, who are best acquainted with the peculiar effects of the course. As is common during the employment of mineral waters of this powerful character, a certain degree of constitutional change is produced in a shorter or longer period, which must be watched and carefully regulated; although it is rarely so great as to require more than a partial suspension of their use. This effect ordinarily precedes, and is commonly attended by, some alleviation of the malady; hence it is probably produced by the absorption of the mineral water into the system. It is better to take two courses of the baths, of four or five weeks each, leaving an interval of ten or fifteen days for the invalid to recruit his strength. The season of the baths does not begin till the hot weather is fully set in, that is, not till the end of June, and should be completed by the beginning of September, or as soon as the autumnal rains occur. The susceptibility of the general constitution is very much increased by undue perseverance in the course of the baths, and the internal use of these waters. After the autumnal rains, the atmosphere undergoes a

considerable change; the air becomes much more moist, heavy storms occasionally fall, the whole atmosphere is in a highly electric state, and although the actual humidity, as measured by the hygrometer, may not be great, yet it is comparatively so with reference to the previous dry state of atmosphere which has existed for many months. These circumstances, and above all "Experientia optima magistra," warn us that there is much risk in the use of the waters after the rains. The houses of Ischia are not proof against bad weather; and there are no amusements to supply the place of brilliant days and sunny skies, while the invalid is usually languid and weakened, and reduced in flesh and strength from great perspiration. It is not till after a few weeks, when the strength is recovered, that the full benefit of the course is experienced, and then the results are generally most satisfactory. But if the use of the baths of Ischia be proscribed as dangerous after the rains of Italy, which last two or three days only, how far greater risk do they encounter who, after the warm baths of Carlsbad or Wiesbaden, with the system relaxed and highly susceptible of cold, on their return homewards experience the humid atmosphere of the Rhine, the passes of the Alps, or the Tyrol, or the bleak range of the Appennines, and the season of storms approaching! The months of September, October, and November, in Italy, are the most delicious, perhaps, of the whole year; the temperature is truly luxurious, affording a

striking contrast to the weather at the end of autumn in the northern countries; hence in a constitution rendered susceptible by a long course of warm baths, an immediate return to a cold and humid climate is very likely to counteract the good effects of the course and reproduce the disease.

The waters of Gurgitello have received ample testimony of their efficacy in various diseases: in gunshot wounds; in fistula; in rheumatic affections; in the sequelæ of gout; in old ulcers; in uterine diseases, as dysmenorrhea, amenorrhea, irritable uterus, and sterility consequent on that state; in paralysis, especially as the result of fever; in glandular and other scrofulous diseases; in dropsical effusions, arising from exposure to cold or humidity; in chronic peritonitis, and other chronic inflammations; in contractions of the limbs; visceral obstructions, as of the liver, from living in hot climates; and of the spleen, or pancreas, the result of intermittent fever; in obstruction of the mesenteric glands; in irritable bladder; and nephritic disorders; in repelled eruptions; in pains of the bones, and other syphilitic affections, or the consequences of mercurialization; in old Indians who have been injured by climate and excesses, in whom the effects of the climate of England is often prejudicial; in the man of dissipation, whose constitution has been debilitated and impaired by indulgence; in all these cases, the baths of Gurgitello, and the beautiful atmosphere, and tranquil seclusion of

Ischia, are most strikingly beneficial. But there are neither gaming tables nor balls; the short period of sojourn there is devoted solely to the recovery of health; and those who have other objects, may drink the water of Baden-Baden, or Wiesbaden.

The waters of Gurgitello are found to be exceedingly advantageous, not only in general baths, but also as an injection in uterine and hœmorrhoidal diseases; calming irritation, and inducing the natural periodic relief; and alleviating tenesmus and irritation of the rectum. In fistula in ano, its effects are very striking; it gives great ease and comfort, and excites to healthy action. In old fistulous sores, in other parts of the body, arising from gunshot wounds, or other injuries, much benefit is also obtained; in this respect, the waters not yielding in efficacy to those of Bareges. Of 3400 cases received into the Monte di Miserieordia, from 1829 to 1836 inclusive, consisting of the bad or hopeless cases of all the hospitals in Naples, 3000 received marked and substantial relief, and only 400 were unaffected by the course.

The waters of Gurgitello are injurious in those cases where there is congestion; in plethoric persons, threatened with apoplexy, and in affections of the heart in the same class of subjects; they are useless in cases of specific organic disease, as cancer, &c.

ACQUA DI CAPPONE.

This spring riscs within thirty or forty yards of the former, and is in great abundance. It has the smell of weak chicken broth, and some have considered its name to have been derived from that circumstance. It has always been reputed by ancient authors as a specific for pains in the stomach; and its etymology is therefore probably more justly derived from κατα πονων, contra tormina. This spring affords an ample supply of water for the baths recently erected by Monti. It is of a temperature considerably less than the water of Gurgitello, being only 98° of Faht. Hence it can be used as a bath direct from the spring without being cooled down in reservoirs. In its chemical properties it is far less powerful than the Gurgitello; but it forms an excellent preparative for it. The Acqua di Cappone is also a valuable remedy in uterine disorders. It is said to produce an aptness to conception, for which it was long since celebrated by Jasolin; and this is very probable in those cases in which sterility is caused by morbid irritability of the uterus. It is also very beneficial in cases of irritable bladder, and in disorders of the kidneys. It is taken internally in the morning, fasting, in doses of two or three pints at separate intervals, using exercise between the glasses. The quantity of saline ingredients is not so great as in many of the other waters; but it is a good introduction to the course.

ACQUA DI CAPPONE.

Sp. gr. 1004,24. Temperature 98°	Taste of weak chicken broth. Color, clear and transparent. Smell, like weak broth.

Ingredients in a pint of water. Analysed by Signor Guarini.	Acqua di Cappone.
	Cubic. Inches.
Free carbonic acid	1,4558
Bicarbonate of soda	10,9721
——— lime	,6431
——— magnesia	,4724
Hydrochlorate of soda	26,9400
Sulphate of soda	,2391
Silica and sulphate of lime	0,0505
Alumina and oxide of iron	0,0065
Hydriodate and hydro-bromate of potassa	traces.
Silicate of soda	ditto.
	39,3244

This water is moderately aperient and diuretic, acting gently on the intestinal canal, removing offensive matter, and hence relieving irritation produced by feculent accumulations. Its use in irritation of the bladder and kidneys has been long observed, removing sabulous matter, and altering the character of the urine. It is also said to have relieved obstructions of the liver and mesenteric glands. Its mild alkaline properties render it useful in diseases of the skin.

It may be kept in well corked bottles for any time.

ACQUA DELL' OCCHIO, OR BAGNO-FRESCO.

This water is of a moderate temperature, and is frequently ordered as a preparative for the other baths. It is smooth and agreeable to the skin, and has an exceedingly pleasant effect upon the surface, similar to the water of Langen-Schwalbach, to which, however, it is very superior in its chemical properties.

This spring rises in the valley of Ombrasco, about sixty yards from the former one, and opposite to the valley del' Tamburo. There is a tolerably good building for baths, consisting of two rooms, with five baths, and doushes in each chamber. It is called dell' Occhio from its reputed benefit in diseases of the eye, and Bagno-fresco from its lower temperature. This water has been analysed by Professor Lancelotti, and the results presented in a memoir to the academy of sciences at Naples; it has a very striking analogy both in temperature and constituents, to the baths of Lucia.

ACQUA DELL' OCCHIO, OR BAGNO-FRESCO.

Sp. grav. 1002,99. Temp. 100°.	Taste, sweetish, saline. Color, clear and limpid. Smell, none. Touch, soft and unctuous.

Ingredients in a pint of water. Analysed by Lancelotti.	Acqua dell' Occhio.	Analogies, Lucia, Langen, Schwalbach.
	Cubc. Inch.	
Free carbonic acid gas.....	1,5881	
Bi-carbonate of soda.....	11,0286	
——————— potassa.....	0,0001	
——————— magnesia.....	1,8106	
——————— lime.....	6,9978	
——————— iron and manganese	,0039	
Sulphate of soda.....	,5800	
——— ——— lime.....	,3719	
Nitrate of soda.....	,1520	
Alumina.....	,0050	
Silica.....	,0010	
Organic matter.....	———	
	23,7911	

This water gives a whiteness and softness to the skin which makes it very desirable for ladies. If the baths of Gurgitello produce too great excitement, it is moderated by the use of the Bagno-fresco. It was formerly called Acqua dell' Cotto, from being reputed to be beneficial in burns and scalds, in which its agreeable temperature and emollient properties may very probably be useful. It is said to be beneficial internally in nephretic and calculous disorders, which is probable from its alkaline properties.

There are various springs which arise near the Bagno-fresco, in the valley of Ombrasco, and the ravines of Tamburo and Sinigalla—viz.: the

ACQUA SPENNA POLASTRO,

Which arises in the middle of the bed of the stream of la Pera, a short distance from the Bagno-fresco. It derives its name from the facility with which the feathers of fowls are removed after immersing the animal in the water. It is of the temperature of 180° of Faht.

ACQUA DELLA COLATA.

This is of the temperature of 179° or 180°; and is employed by the women to wash their clothes, for which purpose there are large stone troughs prepared. It rises at some distance from the Acqua Spenna Polastro, on the side of the same stream as della Pera, and is called della Colata from the use to which it is applied, the alkaline quality of the water forming an admirable natural ley.

ACQUA COCIVA.

This water rises near a house that was formerly erected for washing linen. The inhabitants make small excavations in the ground, into which the water is received, which is hot enough to cook their food. The temperature is 190° of Faht.

ACQUA SCIATICA OR SINIGALLA.

The temperature of this spring is about 145° of Faht. It arises near the opening of the valley of Sinigalla, and unites with the other streams in the vale of Ombrasco. The preceding streams all arise in, or near, the valley of Ombrasco. From this valley, on the left hand, proceeding upward, we enter the valley or chasm dell' Tamburo.

ACQUA FERRATA.

This spring was formerly considered to have some chalybeate properties, but the quantity of iron is very minute, and the spring is now gone entirely into disuse. It arises at the entrance of the valley of Tamburo.

BAGNI D'ORO E D'ARGENTO.

It was formerly thought that gold and silver were to be found on the island. But it is more probable that some crystals of iron pyrites found in this stream gave origin to the idea. There is still a great quantity of iron sand containing titanium found on the sea shore; this sand is collected and easily smelted at the iron foundry at Naples. The waters rise near the little stream that runs down the valley del' Tamburo, and some yards from the Acqua Ferrata.

ACQUA DI RIVAZ.

This spring was explored by M. de Rivaz, a talented physician who resides at Naples, and who usually visits the island of Ischia every summer. The zeal and research evinced by this gentleman in exploring the waters of Ischia, merit some durable memorial, and I am most happy to acknowledge the assistance I have received from his work on the Baths of Ischia. This spring rises on the right in ascending the valley; a large excavation has been made by M. de Rivaz; and the water flows from it at the temperature of 178° Faht. and has a remarkable smell of naphtha.

ACQUA DEL TAMBURO.

This spring is so called from the sound of large bubbles of gas which, bursting within the cavity, produce a noise like the sound of a drum. It springs from the rock on the right hand, a little above the last mentioned source. Its temperature is sometimes as high as 210° of Fahrenheit.

There are several little rills of various degrees of heat, which arise near the Acqua del' Tamburo; some so hot as almost to scald the finger, while others are much less so. They unite and flow down the valley, forming together a rivulet of a moderate and agreeable temperature.

ACQUA DI VERDE.

There is still another stream which arises higher up the ravine in the midst of lava and scoriæ. It is of a brisk and sparkling character, and of a temperature of 178° Faht. As there is no distinguishing name to it, I would propose to adopt that of Signor Verde, the zealous and intelligent medical practitioner of Casamicciola, whose active life, spent among the rocks and lavas of his native island, is aptly represented by the brisk and sparkling streamlet that rises in the midst of scoriæ and lava in the valley of Tamburo. These various waters have not been minutely analysed, but all of them consist of similar ingredients to those already described, viz. of muriate and carbonate of soda, with small quantities of sulphate of soda. They are aperient, and diuretic, but are rarely employed medicinally.

ACQUA DI CASTIGLIONE.

This spring rises on the sea shore near the high road from Casamicciola to Ischia. It rushes out from amidst blocks of lava, nearly on a level with the sea, and is received into a building of masonry, about six feet by three; there is a second chamber for invalids. The shore all around exhibits extraordinary marks of volcanic influence; huge masses of lava attest the violence of former eruptions, and the heat of the soil just below the surface shews

distinctly that a powerful agent yet lurks beneath. The temperature of the two chambers, resting on the lava is 92° of Faht. Sand taken from the shore at a short distance from the spring is nearly of the temperature of 212°, or that of boiling water.

A hot spring rises in the sea near the shore, by which the temperature of the water is very sensibly augmented. This is very perceptible in calm weather, when the water is not much agitated. On remonstrating once with a gentleman for going into the sea to bathe, as cold bathing was likely to be injurious to him, he replied, that he took a warm bath in the sea at Castiglione! The water of Castiglione is without smell, of saline taste, clear, and transparent. Its temperature in the reservoir is 132°; but at the source it rises to 160°. This is a most remarkable and valuable mineral water, and contains a large proportion of saline ingredients. Taken internally, it has an active aperient effect, similar to the Acqua del' Muraglione of Castellamare, but has no sulphurous character. It is frequently employed as a preparative for the waters of Gurgitello. It is to be deeply regretted that there are no adequate accommodations for baths at this place. The situation is most picturesque and beautiful, exactly opposite the promontory of Misenum; the sea, usually calm and tranquil as a lake, ripples beautifully on the sandy shore, and most tempting for the bath. The country around glowing with all the richness of an Italian landscape; the land gradually rising from

the shore to the mountain of the Epomeo, upwards of 2540 feet high; covered with vines where the ground is cultivated, and with the loveliest plants and flowers in spots untouched by art. Not only are the hot springs of unequalled value, but there are natural stufe also of great importance. Surely few places could hold out such advantages to the speculator, or would be so certain of rewarding enterprise. The establishment of a large *Salle des Bains* with a boarding house, close to the shore, would amply repay the expenditure, and become a source of benefit to the public, and of profit to the individual.

ACQUA DI CASTIGLIONE.*

Sp grav. 1004,63. Temp. 167°.	Color, clear, transparent. Taste, brisk and saline. Smell, none.	
Ingredients in a pint of water. Analysed by Covelli and Guarini.	Acqua Castiglione.	Analogy, Carlsbad, Berzelius.
Free Carbonic acid gas	———	
Subcarbonate of soda	6,000	
Sulphate of magnesia.....	9,340	
——— alumina	1,000	
Hydrochlorate of soda.....	40,000	
Loss.....	1,000	
Total fixed substances in the pint....	57,340	

It is to be regretted that the premature death of the scientific Covelli has delayed the publication of the quantitative analysis by the Academy of Seiences. The saline ingredients are similar in quality and in quantity to those in the water of Carlsbad; and more than in the fountain Rakoezi of Kissingen. The temperature of the Aequa Castiglione is 167°; that of Carlsbad 165°.

* Ingredients in a pint of water according to Professor Vulpes.

	grains.
Frec carbonic acid gas	——
Hydrochlorate of soda	43,939
Sulphate of magnesia	11,259
Carbonate of soda	8,500
Alumina	4,393
Loss	1,098
	69,189

The waters of Castiglione are powerfully aperient and diuretic. They were recommended by the ancients, for debility of the stomach and abdominal viscera. They are excellent in cases of habitual constipation, unloading the bowels without debilitating. In obstructions of the liver and jaundice, in hysteria and hypochondriasis, in hœmorrhoidal diseases, induced by constipation, their effects are strikingly beneficial. In all those cases in which the waters of Gurgitello have been recommended, the waters of Castiglione are still more useful. They are taken in doses of two or three pints, in the morning, fasting, with exercise in the intervals. The water is not at present used for baths, because the masonry is destroyed, and no one will undertake the expense of rebuilding it.

Proceeding onwards towards the town of Ischia by the high road from Casamicciola, we arrive at the lake of Ischia. This was formerly a fresh water lake, but the sea having gained upon the whole of this part of the coast, has made a breach into it and rendered the water brackish. This fine piece of water is now filled with fish which are most of them of the salt water genera, but which, from the mixed character of the water, are enabled to live and fatten in their new position. There is a little island of lava in the midst of the lake, on which is a small building.

BAGNI D' ISCHIA.

On the shores of this lake, and by the side of the road, about a mile from the town, are two mineral springs, which are called Bagni d' Ischia. They are situated near the Royal Casino, and on the borders of a fertile plain, abounding in all sorts of fruits and vegetables. The springs are named Acqua di Fontana, and Acqua di Fornello. They are both of the same physical qualities, evolving bubbles of carbonic acid gas, and having a brackish taste. The Acqua Fontana is the first we come to in the road from Casamicciola, and the Acqua Fornello, so named from the shape of the masonry with which it is covered (being like an oven), is a few paces nearer Ischia. The saline ingredients of these springs are exhibited in the following table; and were there not so many medicinal waters of a similar kind on the island, they would doubtless be still resorted to. The numerous other springs which arise in this neighbourhood and trickle down the wall on the side of the road, are neglected only from the abundance of mineral waters already known and employed; and although it would be easy to enumerate mineral springs on the island almost without end, yet those already in use are quite ample for all medical purposes, were they but made available to the utmost possible degree, by the erection of proper bath rooms, and by keeping those now in existence in a state of order and cleanliness.

BAGNI D' ISCHIA.

ACQUA DI FONTANA. ACQUA DI FORNELLO.

Sp. grav. 1005,80. Temp. 136°.	Color, clear and transparent. Taste, brackish. Smell, none.

Ingredients in a pint of water. Analysed by Professor Lancelotti.	Acqua di Fontana e di Fornello.
Free carbonic acid gas	———
Bicarbonate of soda	5,9507
——————— lime	,1835
——————— magnesia	1,8486
——————— iron	,6000
Sulphate of lime	,1298
——————— magnesia	,1433
——————— soda	,4635
Hydrochlorate of soda,	29,7032
Hydriodate of potassa	0,0313
Silica	,3065
Alumina	,0067
Hydro-bromate	traces.
Organic matter	,1117
	39,3888

These waters were celebrated as aperient and tonic. They are recommended in visceral obstructions, in nervous debility, old paralytic affections, rheumatism, gout, &c. &c. &c.

The following verses are quoted by M. de Rivaz from F. Lombardi.

DE BALNEO FONTIS.

"Succurrit Plagis ferrum extrahit impete magno,
Pulmoni confert hepatis atque malo
Consumptos reparat cito prolongatque capillos,
Emundat scabiem, fragmina ab osse trahit."

DE BALNEO FURNELLI.

"Quartanæ confert spleni, capitisque dolori,
Subvenit Hydropi, Phlegmaticæque febri,
Vesicam reserat, lapidem perfringit, arenas
Educit, prodest mirifice podagris;
Omnia languentis stomachi fastidia sedat;
Furnelli a forni schemate, nomen habet."*

An admirable catalogue of virtues; and if true, the Bagni d' Ischia would justly claim to be considered the most efficacious waters in the world. They are, however, analogous to the other springs; and thus it is probable that Strabo and Pliny, when they spoke of the waters of Ischia, referred, not to these only, but to all the known mineral waters of the island, and more especially those abounding in alkaline salts. Thus Strabo says: "Thermæ hujus insulæ (Ænariæ) creduntur calculo laborantibus remedium esse."—*Geograph.* And Pliny: "In Ænaria insulâ calculosos mederi."—*Pliny Hist. Nat.* We cannot doubt, therefore,

* Franc. Lombardi Schol. in Ænariar. Baln. J. Elysii p. 4. Vegg. anche il Capac. de Baln. Neapolitan. et Pithecas. Lugd. Batav. 1723.

that the other waters which are more abounding in alkaline salts would be more efficacious in calculous disorders, and the catalogue of miracles said to be effected by the Acqua di Bagni d' Ischia by Lombardi and de Rivaz, is sufficiently ample. These waters may be used externally and internally, but more generally the former. They have to a great degree been superseded by the waters of Gurgitello.

ACQUA PONTANA.

This spring rises in a garden belonging to a family of that name, near to the town of Ischia. It flows into a large reservoir, which was formerly arched over and ornamented with a large head of Terra Cotta; hence it was called Acqua del' Capone. There were several other mineral springs in the town of Ischia, or its immediate neighbourhood, now swallowed up by the sea, which is continually encroaching upon the coast. This spring is not much used except for domestic purposes, as the town of Ischia is but little frequented by strangers; although, from the beauty of the adjacent scenery, and the salubrity of its air, it might vie with any place, in attractions. Its neighbourhood was the locality selected for a royal residence. The Acqua Pontana is a clear, limpid water, of a slightly saline taste, and without any particular smell.

ACQUA PONTANA.

Sp. grav. 1001,36. Temp 94°.	Taste, slightly alkaline and saline. Smell, none. Color, clear and transparent.

Ingredients in a pint of water. Analysed by Cassola.	Acqua Pontana.
Free carbonic acid gas	
Bi-carbonate of soda	
——— ——— lime	
——— ——— magnesia	
Sulphate of magnesia	
——— soda	
Hydrochlorate of soda	
Oxide of iron	
Alumina	
Silicates of iron and lime	

This water has been vaunted in all sorts of maladies, both external and internal, and both by the ancient and modern professors of our art. It resembles the other waters of the island, although possessing their qualities in a less powerful degree, and is now little used, being superseded by them.

ACQUA DELLA RITA.

In a wild and romantic ravine, filled with blocks of stone, and having the form and appearance of a volcanic crater, flows, from amid a heap of lava, the small rivulet della Rita. It is within a few minutes walk of Casamicciola, and is a resort of the Ischiote peasantry for the purpose of washing their linen; for this object a series of large troughs was erected, which were greatly injured by the earthquake of 1828. This spring has several origins, which united together, form a small streamlet flowing into the sea near Lacco. It has at its source a temperature of 158° of Faht., a degree of heat sufficiently great to test the endurance of the women resorting to it. The water is clear and transparent, has a faint smell, and saline taste. It is unctuous and alkaline to the touch, forming an admirable natural ley for the washing, and a wholesome and agreeable bath, grateful and soft to the skin, cleansing it from all impurities.

ACQUA DELLA RITA.

Sp. grav. 1003,37. Temp. 158°.	Color, clear and transparent. Taste, rather faint and saltish. Smell, *fade*. Touch, soft and unctuous.

Ingredients in a pint of water. Analysed by Covelli and Guarini.	Acqua della Rita.
Free carbonic acid.....	
Sulphate of soda.....	3,8716
Bi-carbonate of lime	2,3660
——————— soda	7,7026
——————— magnesia.....	,7823
——————— potassa	traces.
Muriate of soda.....	8,7632
Alumina and per-oxide of iron.....	0,0155
Silica and sulphate of lime.....	,7145
	24,2157

The peasant who, in the course of his labour, has sprained or injured his limbs, seeks in the Acqua della Rita a never failing relief and remedy; a grateful fomentation, applicable instantly, ready heated to a due and pleasant temperature, soothing to his suffering, and restorative in its effects. This water is useful in other medical cases, in the same manner as the Bagno-fresco, but it is of much higher temperature. Internally it is a mild alkaline remedy, valuable in gravel and other calculous affections, and in nephritic cases; and affords another modification of the numerous forms of combination so richly and mercifully afforded in this extraordinary country. The spring, at its principal source, produces a noise similar to the Acqua del' Tamburo, and probably from the same cause, viz. the formation and bursting of large bubbles of gas. The Ischiote girls also use this water for cooking their vegetables, which, from its containing a quantity of alkali, retain when boiled their beautiful green colour.

ACQUA SANTA RESTITUTA.

"In the little creek of San Montano, in the year 257 of the Christian era, was thrown the body of the Virgin Santa Restituta. She was of an illustrious family of Ponizaro in Africa, where she acquired the palm of martyrdom for having embraced the Christian religion under the reign of the Emperor Valerian. Her body, having been abandoned to the mercy of the waves in a little bark filled with combustible substances, was borne from the coasts of Africa to the shore of San Montano, where it failed not to proclaim its presence by the performance of miracles. A Christian woman of the island, named Lucina, hastened to afford to this precious deposit a proper burial, and raised a little chapel to her honor in the place where is now situated the convent of the Carmelites at Lacco. Constantine the Great subsequently caused the body of Santa Restituta to be transported to Naples, to the church which he constructed to her honour, and which now is united to the cathedral of St. Januarius."

Such is the legend, obtained from the Breviario Napolitano, of the history of this saint, who is the protectress of the island, and after whom the place is named, to which our attention is now to be directed.

On the 17th of May the annual féte of this Virgin takes place in Ischia, and is particularly celebrated at Lacco; and the admirer of the

picturesque would be amply repaid by visiting the island on that day, when all the peasantry, not only from Ischia itself, but from Procida and the adjacent continent, assemble at Lacco. The beauty of the island just bursting into the loveliness of spring, the groups of peasantry, the variety and picturesque character of the costume, the innocent and light hearted gaiety of the people, the singularity and natural elegance of the national games, the tarentella, which is there seen in all its activity and gracefulness, all combine to make a visit to Lacco on that day one of the most interesting excursions that can be imagined. To the painter, the grouping of figures, the brightness of the colors, the scenery of the spot, and the peculiar clearness of the atmosphere, form a subject for study almost unique; while the moralist will meet with nothing to offend the most refined mind. This indeed is a characteristic of all the fêtes in Italy.

The spring of the mineral water named di Santa Restituta is found near the little chapel dedicated to that Virgin. It flows abundantly into a square receptacle, in a small building on the shore, where there is one single bath wretchedly kept. The little building adjoining is the place where the sand baths are taken.

ACQUA DI SANTA RESTITUTA.

Sp. grav. 1013,8. Temp. 122°.	Taste, strongly saline. Color, clear and transparent. Smell, none.	
Ingredients in a pint of water. Analysed by Lancelotti and Kastner.	Acqua di Santa Restituta.	Analogy water of Pandour, Kissingen.
Temperature	122°	54°
	Cubc. Inches.	
Free carbonic acid gas	3,0122	*
	Grains.	Grains.
Bicarbonate of soda	10,9436	0,03
——— lime	2,8690	5,85
——— magnesia	3,5156	1,62
Hydrochlorate of soda	93,4107	57,00
——— potassa	8,0587	0,25
Sulphate of soda	7,6627	1,75
——— lime	———	0,75
Hydro-bromate and hydriodate of potassa and magnesia	traces.	,68
Carbonate and peroxide of iron	,0980	,45
Silica	,0670	1,55
Alumina	———	0,05
Phosphate of soda	———	0,05
Organic matter	traces.	0,99
	126,5253	70,12

This appears to be the richest in saline ingredients of any water with which we are acquainted, containing more than two drams in the pint. It is employed in similar cases to the Acqua di Gurgitello.

* The analysis of the waters of Kissingen does not give the quantity of free carbonic acid gas, but only the gross amount free, and in combination.

The Acqua di Santa Restituta is usually employed only externally in baths. It is a powerful mineral spring, having all the medicinal properties of the most famed waters of Germany, similar to the Rakoczi and Pandour of Kissingen, but stronger in saline ingredients, with the additional advantage of being ready prepared in point of temperature for the bath. Waters of such power, however, must be used only under great precaution and after competent medical advice. Externally it is beneficial in rheumatic affections, in old paralytic diseases, in dropsies, and other maladies arising in a cachectic state of constitution, in congestions in the abdominal viscera, in uterine disorders, especially amenorrhea, and leucorrhea, and generally in all those cases in which there is atony of the system. Internally this water is useful in all cases of visceral or intestinal obstructions and disorders of the lymphatic system. The village of Lacco, which is near to these several springs, is beautiful and healthful, and the Casini in its neighbourhood are let during the season to strangers. The kings of Bavaria, Wirtemburg, Sardinia, and of Belgium, have successively rented a house in the neighbourhood. It is to be deeply regretted that the baths of Ischia are not all of them more carefully improved, and supported with care commensurate with their value.

Here the wonders of subterranean fire are rather strongly manifested. If a hole be made in the sand on any part of the shore, it becomes filled with

water the temperature of 112° Fahr., and the sand is so hot that it can scarcely be held in the hand. In the neighbourhood of de Capitello, at Mezzavia, a block of lava, so called, the subterranean heat is so great that the thermometer, placed in a hole in the sand, will mount to 172° of Fahrenheit. This is indeed an extraordinary part of the island, and the form and character of the rocks, the immense masses of lava seen in different directions, and the heat of the soil a short distance below the surface, all shew that a mighty agency has been at work which is not yet extinguished. How puny are the works of man when brought into contrast with the stupendous operations of the Deity! And, in the contemplation of the mighty energies displayed in volcanic countries, how unnecessary does it seem to speculate upon the mode of upraising this or that mass of mountain or of continent, if we only recollect that the Almighty fiat which said, "Let the waters be gathered together, and let the dry land appear," was immediately obeyed; and "it was so!" is the emphatical announcement of it. If any one has the daring scepticism to doubt the power, let him visit the Phlegrean fields, Monte Nuova, or Ischia

There are many other thermal waters in this neighbourhood. The proprietors of the vegetable gardens have sunk various wells for the irrigation of their land; and there are no less than six springs worthy of notice for their mineral properties. One of these has been named after her majesty, the

queen's mother, "Regina Isabella." The others have no particular names. Their temperatures are as follows:*

	Temp.
Water of Queen Isabella.....	107° Fahr.
Springs nearer the sea.....	104°
Ditto under the garden of the monastery	104°
Ditto before the entrance of ditto.....	95°
Ditto adjacent to the last.....	91°
Ditto on the opposite side of the road going to San Lorenzo	118°

* De Rivaz.

ACQUA ISABELLA DI BORBONE.

Sp. gr. 1011,95. Temperature 107°	Color, clear and transparent. Taste, strongly saline. Smell, none.

Ingredients in a pint of water. Analysed by Professor Lancelotti.	Acqua Regina Isabella.
	Cubic Inches.
Free carbonic acid gas	4,61
	Grains.
Bi-carbonate of lime	2,0046
——————— magnesia	,4009
——————— iron and manganese	,0501
——————— soda	7,4006
——————— potassa	0,0042
Sulphate of soda	4,6057
——————— potassa	0,0042
——————— lime	0,7987
——————— iron and manganese	traces.
Hydrochlorate of soda	15,7823
Hydriodate of potassa	,1611
Alumina	,0805
Silica	,0072
Organic matter	,4700
	31,7701

This is a fine acidulous water, containing the largest quantity of carbonic acid gas of any spring on the island, and a large proportion of carbonate of soda, thus constituting an excellent and brisk native soda water; mild and *spirituelle*, emblematic of the illustrious lady after whom it is named.

The Acqua Regina Isabella may be ordered in all those cases in which a mild aperient and alkaline water would be useful, viz.: in calculous and nephritic complaints, in acid dyspepsia, irritable stomach, sympathetic headache, heartburn in pregnant women, &c. &c. And as the neighbouring Acqua di Citara has the reputation of inducing pregnancy, so this Acqua Regina Isabella is good to relieve one of its most annoying concomitants.

The Ischiote gardeners find these warm alkaline springs vastly conducive to the growth of their vegetables, which are produced in great luxuriance and of excellent quality.

ACQUA SAN MONTANA.

This spring rises near the hamlet of San Montano, among blocks of lava originally thrown from the crater of Monte Vico. There is a small building on the coast in which it is received. The temperature of the water is 112° in the reservoir, but at the source it mounts up to 130°. The situation where it is found is very picturesque, being between Monte Vico, on the one side, and the bold promontory of Zara on the other; and the contrast is striking between the rough and dark masses of lava and the tranquil sea shore, on which peacefully rolls the blue Mediterranean.

The water of San Montano is very similar to that of St. Restituta, but it is said to be still more

abounding in fixed matter: the temperature at the source is 130°; specific gravity, 1001,64. It is clear and transparent, without smell, but of a strongly saline taste. It contains the same chemical constituents as the water of St. Restituta; but its quantitative analysis has never been accurately determined. It is used only in baths, for which there are no accommodations on the spot; it is therefore conveyed to the house of the patient when required, and it does not lose any of its virtues in being transported. The shore near San Montano is admirably adapted for sea bathing.

ACQUA DEL' CAPITELLO.

Sp. grav. 1025,39 Temp 152°.	Colour, clear and transparent. Taste, strongly saline. Smell, none.

Ingredients in a pint of water. Analysed by Guarini and Covelli.	Acqua del' Capitello.
Free carbonic acid gas.....	
Hydrochlorate of soda.....	27,6997
——————— lime.....	3,6054
——————— magnesia.....	,1593
——————— potassa.....	,0942
Sulphate of soda.....	13,5078
——————— magnesia.....	,9303
——————— lime	,1038
Carbonate of soda	,6595
Peroxide of iron	,0956
——————— manganese	traces.
Hydriodate of soda.....	ditto.
Silica.....	,1257
Magnesia	,7666
Organic matter and loss.....	,0620
	48,4694

The Acqua del' Capitello is very rich in saline ingredients, having a larger proportion of the sulphate of soda than most of the other waters of the island. It is an excellent saline aperient, analogous to the Leamington water, and may be used in similar cases to that of Gurgitello.

ACQUA FRANCESCO I^mo.

This water rises in the neighbourhood of Foria, at a place called Ceriglio, in the house of a private person named Calisi. The town of Foria is so called from the Greek word φορος fertilis, and certainly nothing can be more productive than the soil around this pretty town, which is quite worthy of a visit. Within a few minutes walk from it, is a convent, from the terrace of which is a most grand and splendid prospect, embracing a sea view of surpassing beauty, and a landscape rich and fertile in the extreme. The water of Francesco I^mo. has a temperature of 113°; it is clear and transparent, with saline taste, and a smell like weak broth. It is used internally and externally. There are three decent baths fitted up for use, which would be much more generally employed were the place not so distant from the usual resort of strangers. The poor use the water internally as a purgative. It is lightly tonic, aperient, and stomachic.

ACQUA DI CITARA.

This spring is found in a little bay on the western side of the island, about a mile from Foria. The view of the sea from this bay is grand and sublime, and during the prevalence of south westerly gales, truly terrific. The Capo del' Imperatore stands out in a romantic manner, with

high and rugged cliffs; and the numerous rocks in the sea give a picturesque, but dangerous character to the coast, which has been the scene of many shipwrecks. The Acqua di Citara is received into a reservoir five or six feet square, and about three yards deep. There is a small bathing house near, but the whole is in a miserable condition. It is to be regretted that a spring so celebrated from remote antiquity is not the object of more care and attention. It was held in high estimation by the ancients, and is even thought to have received its name in honour of the Cytherean Venus. The water is clear and transparent, without smell, and has a strongly saline taste. Its temperature is 138^0 of Fahr. In the immediate vicinity of this fountain there are several other springs bubbling with carbonic acid gas, and of a temperature of from 150^0 to 160^0. The water of Citara contains a large proportion of saline substances, of a similar character to the other springs just described.

ACQUA DI CITARA.

Sp. grav. 1005,26. Temp. 125°.	Color, clear and transparent. Taste, saline. Smell, none.
Ingredients in a pint of water. Analysed by Lancelotti.	Acqua di Citara.
	Grains.
Free carbonic acid gas.....	,7518
Carbonate of lime.....	,3983
——— ——— iron	,1342
Bi-carbonate of soda	1,5541
Sulphate of soda	2,5602
Hydrochlorate of soda.....	22,2781
Alumina and hydriodate of potassa	traces.
Silica.....	0,1168
Organic matter.....	4,4758
	32,2694

The doses of the Acqua di Citara are two or three pints taken in the morning, fasting. It will be evident, on inspection of the above table, that the saline matter in this water is in considerable proportion.

It is said to be useful in cases of debility of the digestive system, and in obstructions of the abdominal viscera, and from the powerful aperient and diuretic properties it possesses, such an effect is exceedingly probable. But the great celebrity this water has obtained in cases of sterility, eclipse all its other virtues; and where that is arising from debility or irritability, it has undoubted good effects. In those cases of extreme pain and irritation at certain periods, it alleviates the suffering and calms the irritation, and thus removes a very frequent cause of sterility. In amenorrhea it is very useful, in leucorrhea, in chronic inflammation of the uterus, or fallopian tubes, in debility, the result of frequent miscarriages, in all those affections of the organ depending upon nervous irritation and hysteria, it is beneficial. Even in organic disease it calms suffering, and suspends the progress of the malady. It is much to be lamented that no proper bathing houses are erected on the spot; the water is, however, supplied to the houses of the visitors at an adequate temperature. It is taken internally as an aperient; but in baths, douches, and injections it is especially useful. In cases of sterility, without ascribing any miraculous effects to this water, who can doubt that a residence in a lovely climate, and on an interesting island, with removal from all the excitements of a town life, the constant use of warm baths and injections, with temporary separation, may restore healthy action to an

irritable organ, excite it to its natural functions, and strengthen the general health. And that the Acqua di Citara does all this, is proved by constant experience and the reputation of ages.

In the other sex, where sterility is the result of dissipation, the Acqua di Citara often restores the general strength and improves the health. Absence for some months from indulgence, combines, with these other causes, to bring back the powers that have been wasted and abused.

The same volcanic action is sensible here as in other parts of the island. The sand on the shore near Citara is so hot, within a few inches of the surface, that it can hardly be borne in the hand.

ACQUA DI OLMITELLO.

This water is found on the south side of the island, in a ravine about fifteen minutes walk from Pestaccio, and flows into a well nearly six feet deep. This spring has been twice buried by earthquakes, and again discovered. It is surrounded by a desolation which marks the terrific action that has been displayed. There are two baths in masonry indifferently kept. The peasants use the water that flows away to water their gardens.

About fifty yards from the entrance of this ravine is another, running parallel to it, called de Cavascara, at the bottom of which springs the water of Petrelles, which has a temperature of 205° of Faht.

A little farther on, are some fumaroles of great power, of which, however, no medicinal use is made, but which are very remarkable as shewing the volcanic action still existing, as the sand a few inches below the surface raises the thermometer to 212° Faht., and the water in a hole made on the sea shore makes a temperature of 190° of Faht.

This is nearly the most eastern extremity of the island, and by far the most dreary and desolate of any part to which we have approached. It is terminated by a bluff or promontory, called St. Angelo. The volcanic action at this desolate part of the island is so great, that sand, taken from a few inches below the surface, raises the thermometer to 212° of Faht.

The water of Olmitello has a mild alkaline taste, with no particular smell, and is clear and transparent. There is no quantitative analysis made of it, but it appears to possess the qualities of the other springs of the island. Its temperature is 112° Faht. As it abounds in alkali, it is found useful in nephritic and calculous disorders, and has been beneficial in certain cutaneous affections. From its distance from the more inhabited part of the island, it is little used, except by the poor people around.

It has been commended by the inhabitants as a useful remedy in deafness; and it probably is an excellent injection in cases of hardened wax. Its name has been ingeniously imagined to be derived from *ουλμωτελλος*, *ουλμα* by syncope for *ουλυμενα* perditas; *ωτα*, aures; and *ελων*, stimulans, excitans.

ACQUA DI OLMITELLO.

Sp. grav. 1002,40. Temp. 112°.	Color, clear and transparent. Smell, none. Taste, mild alkaline.
Ingredients in a pint of water. Analysed by Guarini.	
Free carbonic acid gas	
Carbonate of soda	
——————— lime	
——————— magnesia	
Sulphate of soda.....	
——————— lime	
Muriate of soda	
Silica	
Oxide of iron held in solution by carbonate of soda	
	94,0051

It is to be regretted that the minute analysis has not yet been published. The water of Olmitello may be taken in doses of two pints. It much resembles the waters of Castiglione and of Carlsbad.

ACQUA NITROLI.

In the Bourbon museum at Naples will be found several bas reliefs and votive tablets to the Nymphæ Nitrodes, who were supposed to preside over this spring; one is inscribed as follows:

VOTO SUSCEPTO

APOLLINI ET NYMPHIS

M. VERRIUS CRATERUS SOL.

And another: "Apollini et Nymphis Nitrodibus C. Metilius Alcimus V.S.L.A." These were found in the neighbourhood of this spring, and were probably grateful mementos of benefit received. The Acqua Nitroli is on the most southern part of the island, near the bridge of Marossano.

It bursts from beneath a heap of lava, and is received into a large reservoir, from whence it flows in a stream down the valley, joining the water of Olmitello. The situation altogether is less desolate and dreary than that of the former spring; and it is ornamented with trees, which give it a cheerful appearance.

The Acqua di Nitroli has been examined by Professor Lancelotti. It contains less solid matter than the other springs, but it is a brisk, alkaline, and pleasant water; and that it is beneficial in some cases, the grateful votive tablets, of which several were found, abundantly testify. It is less esteemed at present, only on account of the *em-*

barras de richesses presented in the mineral waters of Ischia. It is used only internally; and the cases for its employment will easily suggest themselves to the physician. This is the last of the mineral waters to be described, and the catalogue is indeed a splendid one. Within a distance of about four miles, surely no country in Europe can afford so extraordinary a suite of mineral waters.

ACQUA DI NITROLI.

Sp. grav. 1001,33. Temp. 86°.	Color, clear and transparent. Taste, slightly alkaline. Smell, none.

Ingredients in a pint of water. Analysed by Professor Lancelotti.	Acqua di Nitroli.
Free carbonic acid gas.....	
Bi-carbonate of lime.....	0,9220
——————— soda	traces.
——————— iron and manganese	1,5030
Hydrochlorate of soda.....	1,6231
Sulphate of soda.....	,4028
——————— lime	,0626
Silica.....	,5550
Alumina	,0400
Organic matter.....	traces.
	4,1085

It may be administered in doses of two or three pints, in the morning, fasting, and also may be taken with the wine at dinner. It is used as a common beverage by the peasantry, who are remarkably healthy.

CHAPTER VIII.

THE STUFE OF ISCHIA.

In various parts of the island of Ischia are fumaroles, which are apertures in the soil, from which hot air or vapor is emitted. In certain places these are made subservient to medical purposes; small buildings are erected over the fumarole, and earthen pipes so arranged as to conduct the vapor to different parts of the body. These stufe, as they are termed, constitute most valuable natural vapor, or hot air baths, which are applicable to various disorders. The vapor is not, however, in any degree medicated, but is simply the vapor of water, as the condensed fluid clearly shews. Nor is the hot air medicated with any particular gas, or volatile body, but is simply atmospheric air heated to a given point. The vapor is emitted at a temperature of from 130° to 140° of Fahrenheit; but the quantity may be modified so as to adapt the temperature of the room to the malady and the feelings of the patient. The principle stufe are those of

CASTIGLIONE, CACCINTO,
SAN LORENZO, TESTACCIO.

Of these the three former emit vapor, and the last hot air.

STUFE DI SAN LORENZO.

These are situated near the village of Lacco, on a hill opposite Monte Vico, from which it is separated by the marina of San Montano. It is composed of blocks of lava piled on each other in the most wild and picturesque manner. The vapors are emitted from this mass of lava in divers fumaroles, which are built over, and thus rendered subservient to the uses of the invalid.

In the principal room is an aperture in the floor covered over with a dome of masonry, into which are fixed four tubes of earthenware, for the purpose of conducting the vapor to any part of the body. The other rooms are somewhat differently arranged, but so as to conduct the vapor all over the chamber, and thus form a powerful sudatorium. The fourth room is used for the repose of the patient, which is very necessary after the powerful operation of the stufa. The temperature of the vapor at San Lorenzo is 136° Faht. No one can doubt the efficacy of the vapor bath in many diseases; and, doubtless, if these stufe were fitted up in the best manner of which they are susceptible, they would form a most powerful medical means in the cure of those maladies, for which such remedies are available.

The situation of these stufe is most romantic: the mountain of Vico raises its noble crest in sublime beauty, covered with vines and rare plants; while between it and San Lorenzo are the valley

and bay of San Montano, on the shore of which the body of Santa Restituta is said by the legend, to have been thrown. A delightful place for the cold bath; the sands bright and sparkling, the color of the sea, which gently laves the shore, is rivalled only, by the sky above it. Various magnificent plants of Amaryllis &c. are found on the beach; and everything around and above us seems intended by nature to ornament this beautiful and secluded bay.

STUFA OF CACCINTO.

In passing from Casamicciola to the springs of Castiglione, there is a path on the right hand which conducts up the hill towards mount Thabor. This path, at first sufficiently commodious, becomes at length steep and difficult, from its being traversed by huge blocks of lava, which have formerly been thrown out from one of the subsidiary craters of the island.

Various jets of vapor are seen to arise from the chinks between the blocks of lava; and over the largest of these some low, ill contrived chambers have been erected, constituting the stufe of Caccinto; two of these are supplied with vapor, and the other two are for dressing or repose. The temperature of these stufe may be made to rise to 160^0 of Faht. M. de Rivaz has remarked that a bubbling noise, similar to the distant beating of a drum, is heard in this stufa, especially during the prevalence of north easterly winds, which probably

is caused from the boiling of water below the surface, by which the vapor is formed.

STUFE DI CASTIGLIONE.

These are situated near the springs of Castiglione. There are two rooms, an upper and a lower one, both in wretched order. The vapor given out in the lower room is at a temperature of 120° Faht., and that in the upper room of 103°. A very trifling expense would be sufficient to make these stufe sufficiently commodious for all the purposes for which they are required.

STUFE DI TESTACCIO.

These are situated near a place of that name, on the south side of the island; it is a pretty, quiet, picturesque village, with some tolerable houses, rendering it a delightful retreat for those who seek retirement. Between Testaccio and Marontes are the stufe which have this peculiarity, that they are not vapor, but hot air baths. We have thus the means of obtaining baths of vapor or of hot air, as may be best adapted to the ease of the patient. A little moist rag or paper applied to the month of the tube is quickly dried; and the temperature of the hottest of the apertures amounts sometimes to 188° of Faht., that of the others being from 110° to 120°.*

* In strange contrast to these fumaroles or stufe, there is found in the neighbourhood of Casamicciola a cavern, from

These are the stufe which are used medicinally; but they are capable of far greater and more extensive application than has ever yet been attempted. The inhalation of medicated vapors has been lately much recommended in some pulmonary diseases; and the system has been practised by Sir C. Scudamore, and others, with some success. The great difficulty, however, arises from the nicety required in the apparatus. But at Ischia hot vapor and air are supplied without measure; and a chamber might be fitted up over a fumarole by which the air might be impregnated with medicinal substances in every proportion, and the system pushed to any extent which may be desired.

The use of the vapor bath has been recommended in many cases of scrofulous tumors, and with great success. How beneficially might the hot air of Testaccio be used, impregnated with iodine, or other medicinal substances; especially when assisted by the pure, dry, marine, and electric atmosphere of Ischia. How vast a field lies open for experiment on the value of vapor baths. In ascites and other dropsical effusions, it is often productive of great benefit, when it can be employed without debilitating the system and without

whence there issues a blast of cold air in summer of a temperature of 60° when the external air is at 80°. This is called the Ventorala della Fontera. Within a few yards of this place there is a fumarole which emits vapor at a temperature of 120°.

danger of taking cold, and this is effected without difficulty when used on the large scale at Ischia, and in such a climate as is enjoyed there. Probably many morbid affections, in lymphatic and cachectic constitutions, might be relieved by a course of mineral waters and vapor baths at Castiglione. But it is useless to suggest cases for the employment of such important means; experience has already shewn that they are powerful in arresting disease and altering the constitution to a degree greatly beyond former expectation; and there can be no doubt that in the application of these means, viz. the inhalation of medicinal substances, and the use of baths of medicated vapor or hot air, we are still, as it were, only on the threshold of the temple of Æsculapius.

How wonderful then, and how numerous are the medical resources of this extraordinary country. Surely no spot of fifteen miles in circumference ever afforded so vast a series of interesting phenomena. The Ischiote girl boils her vegetable meal in a stream, hot at its source; and, in the heating of it, a fire is employed, compared with which, that which burns for the preparation of the grandest city entertainment is but as a spark. The vine dresser, returning in the evening from his toil in the southern sun, cuts a trench with his hoe in the sand on the sea shore; in a moment it is filled with a hot and mineralised water, in which he bathes his feet, swoln and tender from the rugged stones and scorching heat to which they have been

all day exposed, bare and unprotected. He sits on the ground; and, while enjoying his luxurious pediluvium, he carols his airs, with all the liveliness and gaiety so characteristic of the Ischiote peasantry; and after a quarter of an hour's bath, he pursues his way home, refreshed and recruited. The fire which warms his foot-bath is the same as that which kindles Vesuvius, and which bursts not in Ischia, only because it has its exit elsewhere. The matron needs no other fuel to heat the water in which she washes the linen of her family, Nature has supplied her with an inexhaustible abundance, at a temperature hot as her hands can bear, and ready charged with alkaline ley from the bowels of the earth.

And if ample use were made of the means which heaven has afforded, the physician might find in this vast laboratory, remedial means provided for him adapted for the cure or relief of many of the maladies of the human frame, all ready compounded, all exquisitely elaborated, and afforded without stint and without charge.

We earnestly hope that the attention of the Neapolitan government will be immediately directed to objects so important; and as their Majesties the emperor of Austria, the kings of Prussia, and Bavaria, and other sovereign princes of Germany, have devoted the greatest care, attention, and expense to improving and ornamenting those places in their dominions distinguished for their mineral waters, so we trust

that his Majesty, the king of the two Sicilies, who possesses within sight of his own palace, thermal and medicinal springs equal in curative properties to the most celebrated springs in other parts of Europe, that he will so regulate and arrange the various places where they are found, and the sources from which they flow, that Naples and its vicinity may be resorted to by foreigners for the excellence of its mineral waters, as much as for its antiquarian and scientific wonders, and the serenity and beauty of its climate; and that the mineral waters of the bay of Naples may prove a source of great riches to the country, and also of alleviation to human suffering.

CASTELLAMARE.

CHAPTER IX.

GENERAL DESCRIPTION.

The great chain of the Appennines which traverses Italy nearly from north to south, gives off various subsidiary ranges. Of these, there is one which crosses the kingdom of Naples from N.W. to S.E. near that city, passing behind and to the eastward of Vesuvius; and another range of hills arises nearly at right angles from this, extending to the cape of Minerva, opposite Capri. These various collateral ranges, although of less elevation than the principal chain, yet rise to a great height, and are covered with vegetation almost to the very summit. The hills which form the south eastern boundary of the great crater of the bay of Naples, consist of a fine grained limestone rock, covered with a layer of Pozzuolana to the thickness of three or four feet. This limestone contains organic remains in great abundance; beautiful impressions of fish, of which the species called by the Neapolitans Sparaglioni (Sparus quarracinus) still exist in the bay, as do also Ammonites and echinites in great number and

perfection. This rock forms an excellent building material; although, from the greater facility of working it, the Neapolitans prefer employing tufa or lava, both of which, however, are far more perishable than this fine grained limestone. These hills are steep and precipitous, but admirably adapted for the cultivation of the vine and the olive; the acclivities are beautifully feathered with the chesnut to their very summit. Where the sides are less precipitous, the higher parts abound in grassy lawn, valuable for pasture, producing the finest butter and veal, for which the Sorrentine and other hills have long been celebrated. One part of the chain was originally called Mons Lactarius; hence the name of a village, Lettere, to this day. The height of these mountains varies from 2000 to 5000 feet above the level of the sea, Mount St. Angelo being full 5000 feet high. The promontory formed by these mountains constitutes the southern and eastern part of the crater of the bay of Naples, a vast volcanic basin, of which the sides around three fourths of the circumference still exist, the other fourth being broken down and destroyed, thus forming the entrances of the sea into the bay. Strabo, describing the bay of Naples, says, "Sinus quem cratera vocant e Miseno ad Athenæum, cum duobus coeuntibus promontoriis, sinuatur. Super has ripas tota est sita Campania, campus omnes felicitate superans; in ejus circuitu vero jacent tumuli, mirifica fructuum ubertate conspicui, montesque Samnitum pariter et Oscorum."—*Strabo.*

Geograph. Castellamare di Stabia, celebrated by Galen,* by Pliny,† and by Columella,‡ for its mineral waters, is placed at the base of these mountains, and in the eastern corner of the bay. It occupies nearly the site of the ancient Stabiæ, and contains about 24,000 inhabitants.§ The ancient city of Stabiæ was twice overthrown: first by Scylla in the time of the civil wars, Anno Urbis Conditæ 664; and afterwards by that tremendous eruption of Vesuvius which destroyed Herculaneum, Pompeii, and various other cities, A.D. 79. Here, too, died Pliny the elder, having sailed from Misenum to Stabiæ that he might witness the awful power of the mountain from the nearest possible point, sacrificing his life to his too great devotion to the contemplation of nature in all her wonders; he was probably suffocated by smoke or noxious gases from the mountain. This will not appear wonderful to those who have witnessed an

* Galenus Methodus medendi, Lib. v. cap. xii.

† * * * "calculosis mederi. Et quæ vocatur acidula ab Peano Sidicino quatuor millibus passuum hæc frigida. Item in Stabiano, quæ dimidia vocatur, et in Venafrano ex fonte acidulo."—*Plinii Hist. Nat.* lib. xxxi. cap. i.

‡ "Fontibus et Stabiæ celebres."—*Columella de Cultu Hortorum*, lib. x.

§ A Greek inscription, found in the port of Castellamare two centuries ago, refers to the port of this city of Stabia as formed by the Senate for the convenience of sailors.

"Suburbia Portumque ad civium et nautarum commoditatem Senatores Stabienses construi curarunt Diphiluo quamvis tardus Architectus ad jussum tamen celer quinquennio absolvit."—*Cappaccio.*

eruption of the mountain even in modern times, when its power is comparatively exhausted. In the eruption of Jan. 1, 1839, a dense cloud covered the whole of the district from Pompeii to Stabiæ, and far beyond it. An oppressive and suffocating vapor hung over these places for three days, and the ashes fell to the depth of from eighteen inches to two feet over the whole promontory; so that it cost the little commune of Castellamare several hundred ducats to remove the accumulation from the public ways.

Castellamare is for the most part built on the level of the sea; but the hill of Qui si Sana rising immediately behind it, is covered with casini and villas, which are let to strangers and visitors who annually resort thither for the benefit of its salubrious air and valuable mineral waters. The approach to these villas is by a winding road, which has been constructed at a great expense, leading to the king's palace. This was erected first by Charles of Anjou as a summer residence, on account of the salubrity of the air. It was enlarged and improved successively by King Robert, by Ferdinand I., and by his present majesty Ferdinand II. It is called *Qui si sana* from its peculiar salubrity, many of the royal family of Naples having here recovered their health. The hills around the palace are intersected by pleasant paths, ornamented with very fine fountains, affording a delightfully shady ride, and accessible at all times to the public. These roads are many

miles in extent, leading to the top of Monte Coppola, a beautiful conical hill covered with chesnut trees, from various points of which are presented lovely views of the bay, Vesuvius, and of Naples. The views of sunset, in summer and autumn, from these woods, are more gorgeous and magnificent than can be imagined by those who have not witnessed a sunset in the Mediterranean. The whole landscape is illumined by tints that painting cannot depict nor poetry exaggerate. In these woods we meet groups of persons on donkies, wanderers from every country: Russians, Germans, Americans, and Indians, but principally the natives of our own land, distinguished for their roaming habits, who congregate here, at more than 1200 miles from home, that they may explore the beauties of this envied region, and survey the wonders of nature and of art, that are scattered in such profusion around.

The temperature of Castellamare in the summer is about eight degrees lower than that of Naples during the day; but it is from 10^0 to 12^0 cooler at night. This difference arises from the land breeze, which is felt at Castellamare with a delicious freshness, blowing gently from the highlands through the night. It is not so much felt at Naples in consequence of its being sheltered from the mountains, by the hill of Pizzo-falcone and the Vomero; hence the difference of the thermometer during the months of July and August is there only about five degrees between midday and

midnight. Those who reside in the summer on the Vomero find the nights much cooler in consequence of their being open to the landbreeze. There is no malaria around Castellamare, although the ground between it and Vesuvius is all alluvium, having been formerly a wide embouchure of a river or arm of the sea, which washed the walls of Pompeii and of Stabiæ, and was navigable to the foot of the mountains. The Sarno, which still flows down the vale, is a rapid, bustling stream, giving ample drainage to the land; and this, added to the careful cultivation which is bestowed on it, leaves not any extent of ground subject to impure exhalations or marshy effluvia. It is true that it is abundantly irrigated; but the fields are so well cleaned, and the husbandry so excellent, that no malaria fevers occur, and it is only occasionally that cases of intermittent fever are met with.

There are many facts which tend to prove that at some remote period the bays of Naples and of Salerno communicated through the glen of Nocera, and that thus the Sorrentine hills formed the island of the Syrens of Ulysses, which was originally so fertile in vines and pastures that it was called the Siren de' Campani. It is found that the strata by which these hills are united to the opposite range are of a more new and recent deposit, and it is therefore highly probable that the sea may by this way have traversed a land, now glowing with vines and pastures. The desolate rocks, called the Sireni, could never have exhibited those scenes so

seducing to the companions of Ulysses, while the land about the promontory of Minerva was called by the ancient geographers the Terra Sirenusarum; and doubtless this beautiful region was adorned by nature with everything that could attract the eye; its coasts broken and indented with rocks and curious caverns, which still return marvellous sounds to the impulse of the waves, and decorated by various important and picturesque cities. Whether, therefore, it were absolutely insular, or only nearly so, its geographical position and its local beauties render it exceedingly probable that this was the spot which was suggested to the poet as the scene of seductive pleasures to the companions of Ulysses.

The inhabitants of this region were formerly pre-eminent for their maritime enterprise and daring. The Amalfitans were distinguished throughout the world as adventurous mariners, and their city has acquired immortal honour by the discovery of the mariners' compass, as well as for the preservation of the copy of the Pandects. The Sorrentines are to this day found in all parts of the world, pushing their ventures to the farthest shores of America, and even of Asia; and the vestiges of ancient cities which are occasionally discovered here, as well as those which now remain, mark the grandeur and the opulence which once existed; while the opposite banks of the Sarno were ornamented with Pompeii and numerous other cities, and the neighbouring coast distinguished by Posidonia or Pœstum, whose noble temples attest a race of inhabitants

polished and refined far above even Rome itself. The arts, and especially architecture, are among the truest measures of mental cultivation; and these noble relics of a mighty people prove a sublimity, and power of conception, unequalled by any other remains in modern Italy; temples to which remote antiquity refers as ancient, and to which we can find no comparison, except among the ruins of Thebes or of Memphis.

How different must have been the aspect of the country before the destruction of Stabiæ, from that which it bears at the present day. Vesuvius, then nearly as high as St. Angelo, presented a grand unbroken cone, instead of being, as now, divided into three peaks. Among the numerous cities at its base, Pompeii has been almost miraculously preserved to us, shewing the perfection to which the arts and the refinements of civilization had arrived at the date of its destruction. Its walls were washed by the Sarno, a wide strait extending to the city of Stabiæ on the other side, and navigable by large vessels for many miles above those cities. The hills at their base were studded with populous villages, of which innumerable vestiges still exist; and those which yet remain, afford a solemn and interesting subject for the contemplation of the moralist and the Christian; who cannot but be struck with the justice of the retribution which overwhelmed these "cities of the plain," in which gross and disgusting vice reigned predominant, as the remains in the private room of

the Bourbon museum at Naples grievously testify ; and let us beware that in the contemplation of such former greatness, and such present decay, we lose not the great lesson so admirably inculcated by our Saviour himself, "except ye repent ye shall all likewise perish."

Castellamare is so called from having been fortified by Charles I., king of Naples, who surrounded the town with walls, and built two strong castles there. It is now important from being the situation of the arsenal and dock yard of the present sovereign. It is a place of considerable commerce, being the depôt for much of the produce of Sicily and Apuglia. Paranzallas, laden with corn, there discharge their cargoes, which are conveyed in light barks to the various lesser towns in the bay, to be manufactured into maccaroni and pasta. Vessels frequently sail from Castellamare to Algeria, to supply forage to the French army; and a fewBritish ships occasionally arrive with coal, for different manufactories in the neighbourhood, receiving oil and fruit, the produce of the Sorrentine hills. The soil in the neighbourhood of the town is exceedingly fertile and productive; and its market supplies with vegetables and fruit, many of the surrounding districts. The wines grown on the hills are full bodied and excellent. The low lands, especially in the vale of the Sarno, afford vegetables of every kind in the greatest profusion. The water melons are famous all over the kingdom, and both these and the fine large net

or cantalupe melons, weighing eight or ten pounds, are sold for three halfpence or twopence each. The land between Pompeii and Stabiæ being all alluvium, is productive beyond measure; it is never exhausted; as soon as one crop is gathered, another is put into the ground; and the rows of one kind of produce already come to maturity, are alternated with those of the coming crop; so that one succeeds to the other unintermittingly. Peas, and beans, and wheat, are succeeded by the cotton plant, palma christi, and maize; and when these are gathered in, artichokes, cauliflowers, and lettuces, succeed as the winter crop. The lands of the valley are carefully irrigated, so that the summer heats force on the several kinds of produce, with a marvellous luxuriance.

The hills, at the base of which the town is placed, are beautiful, both in the peculiarity of their position, and in the variety of their surface. Their steep cliffs are intersected by deep ravines, the beds of former mountain torrents, the sides of which exhibit abundant examples of scenery, both bold and picturesque.

Certainly no place affords a wider field for the genius of architectural invention, either on the score of its rising reputation, or its attractive position. How would the taste of a Burton delight in the adaptation of villas and casini to so exquisite a scene, which would present from every window a view unequalled in any part of the world. How delightful to the horticulturist would be the deco-

ration of such a place, with noble and varied specimens of the magnolia, catalpa, camphor, laurel, orange, and lemon trees; the bosquets of oleander, robinia, pomegranate, metrosideros, and all the ornamental plants of New Holland; the climbers, passiflora, bignonia, cobœa, &c.; the borders of myrtle and camellia; geraniums growing in bushes, the summer flowers of England blossoming in winter, with the flowers of the tropics in summer; the cactus speciosus, and speciosissimus, on the walls and in the fences; while the garden might be shaded by the vines, the fig, the chrysomella,* the albicocche,† and the peach, bearing their fruits in rich abundance.

Nothing, in fact, could be more interesting to the horticulturist than to indulge his favourite pursuit in a country like the south of Italy, in which the same garden might be rendered productive in the fruits of the temperate and intertropical countries; and where, with a little care and science, the apple, the pear, and the peach, might be cultivated in juxtaposition with the ananas, the mango, and custard apple. Castellamare, however, from being colder than the neighbouring country, would not be a suitable place for such experiments; although, doubtless, it would produce many plants of northern as well as of southern Europe on the higher part of the mountain. The woods on the mountain afford a

* True golden apple or standard apricot.

† Prunas Armeniaica.

delightful range for the botanist, whose excursions will introduce to him a great variety of interesting and rare plants, many of which are of alpine character. The high elevations behind, and its northern aspect, shade the greater part of the town during the winter months, so that it is not so warmed by the sun at that time, as the opposite part of the bay.

Nor must we, in describing Castellamare, omit to mention the beautiful road from thence to Sorrento. This work, which has been many years in execution, is now completed, and is one of the finest and most beautiful drives that can be found in any country. The high and precipitous mountain, at the foot of which it passes, rises at some parts from the sea so steep and almost perpendicular, that it was a work of great labour to make a section of it of width sufficient for a road; while at other parts it was so cut by the glens of mountain torrents, that numerous bridges were required, one of which composed of double arches, one row above the other, forms a splendid and picturesque piece of architecture. The prospect of the bay of Naples from this road, enriched by the hues of sunset, when the whole bay is as a golden lake, and Vesuvius of a rich purple color, is indeed magnificent.

CHAPTER X.

MINERAL WATERS OF CASTELLAMARE, AND OF TORRE DEL ANNUNCIATA.

The town and country adjoining Castellamare are admirably supplied with fresh water, which is brought from various sources on the neighbouring hills, and conducted thence by covered aqueducts, to supply the fountains in the Boschetto del' Re, and thence to the various public fountains on the Qui si sana, and in the city. Hence the town enjoys the advantage much prized in various countries, of having an ample supply of good and wholesome water for all the purposes of life. But that which most distinguishes this town, and which has given a reputation to Stabiæ from the time of Galen, is the supply of various mineral springs which exist there in great variety and inexhaustible abundance. These medicinal waters flow from the limestone rock at the base of Monte Gauro, or d'auro, which overhangs the town. They are all at nearly the mean temperature of the place, or about 65° of Fahrenheit; in this respect having a remarkable difference from the thermal waters of Ischia, which are all of high temperature. The springs are most of them found within a short distance of each other, in the garden of the baths,

On Stone by G Barnard

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CASTELLAMARE.

or in the Strada Cantieri, adjacent to it. The Acqua del' Muraglione, however, arises nearly half a mile out of the town. At various parts of the coast, on the road to Vico, are sulphurous springs rising in the sea, or close to its margin, emitting a strong smell of sulphuretted hydrogen gas, and giving a peculiar flavor to the sea water near it. A boatman complained that the white color of his boat, which had been recently painted, had undergone a singular change to that of black, in consequence of his lying too near this place while a gentleman was employed in taking a drawing of the bay :—the sulphuretted hydrogen escaping from the sulphurous springs had acted on the lead of the paint. In fact, these springs on the seashore appear to be strong saline mineral waters, containing sulphuretted hydrogen and saline matter, analogous to the Acqua Solfurea del' Muraglione, which is found near it.

The following is the list of the various waters :—

MINERAL WATERS OF CASTELLAMARE.

Name of the Spring.	Temp.	Character.	Ingredients in the pint.	Analogy.	Authority of the analysis.
Acqua Ferrata	64°	Chalybeate.	———	Tunbridge.	Sementini. Vulpes, Cassola.
——— Rossa.....	64°	Ditto.	———	Ditto.	Ditto.
——— Ferrata del' Pozzilo.....	65°	Ditto.	40,5794	Tœplitz, Schwalbach.	Ditto.
——— Ferrata Nuova	65°	Ditto.	40,2167	Ditto ditto.	Ditto.
——— Solfurea Ferrata	65°	Ditto and Sulphurous.	58,6430	Ditto ditto.	Ditto.
——— Solfurea del' Muraglione..	67°	Sulphurous and saline.	70,5577	Harrogate.	Ditto.
——— Nuova del' Muraglione....	67°	Saline.	73,6587	Cheltenham, Kissingen.	Ditto.
——— Media No. I. and II.....	64°	Ditto.	41,4937	Seltzer.	Ditto.
——— Acidola	64°	Acidulous.	16,8214	Spa, Pyrmont.	Ditto.

This catalogue includes all the springs at present found at Castellamare, which flow spontaneously from the rock. It is most probable, however, that if wells were sunk in the neighbourhood, other sources would be found of equal value; hitherto this has not been attempted, and the rock is of so hard and dense a structure as to render it a work of some difficulty to accomplish. The highly mineralised springs found on the seashore, shew that the riches of the district in mineral waters are still to be explored, and would doubtless amply repay the investigation.

The baths are supplied from the surplus of the mineral waters, which runs off in a stream sufficiently large to turn two mills within a hundred yards of the spot; they are heated artificially to any temperature that may be ordered. The waters generally are clear and transparent; but the Acqua del' Muraglione is slightly opaline when in large quantities. They are without smell, with the exception of the sulphurous waters, which affect the atmosphere to a considerable distance from the source, especially in particular states of weather. The season of Castellamare is from June to the end of September; but the waters are taken by the Neapolitans, usually during the months of July and August; and in those months they are in the most efficient state, not being diluted by rain. They are not exported out of the kingdom, although there is no doubt that they would be in much request if their valuable properties were generally known.

The Acqua del' Muraglione may be transported to a considerable distance without its properties being injured, if it were preserved in well corked bottles, and would form a very convenient purgative medicine; all the others may also be preserved, excepting the sulphurous. But the beneficial effects of these and most other mineral waters arise principally from their being taken on the spot, with all the advantages obtained from the journey, and the benefits of the peculiar atmosphere of the place, to which persons resort to obtain them.

ACQUA FERRATA.

This is a mild and simple chalybeate, analogous to that of Tunbridge. It has a decided metallic taste, and appears to have a sparing admixture of other saline matter. It is but little used, having been superseded by the Acqua Ferrata del' Pozzilo. The source arises at the commencement of the Strada Cantieri, in a low vaulted cave within a mill, and is private property. It is useful in cases of uterine debility, in amenorrhea, in chlorosis, in dyspeptic complaints, &c. &c.

The Acqua Ferrata may be taken in doses of two large tumblers daily, one in the morning, fasting, the other at noon. It should be continued for six weeks, or two months, combined with sea bathing.

ACQUA ACIDOLA.

This water has obtained much reputation for many ages, for the cure of calculous complaints. It was called Media by Pliny, possibly from its being between the two chalybeate waters. The following inscription is over the building erected for its reception.

ACQUÆ ACIDULÆ
*QUAM OLIM PLINIUS
IN PLURES MORBOS COMMENDAVIT
NUNC VERO COTUNNIO VARIO-QUE PROBANTIBUS.
STABIENSES
REGIS ET POPULI
COMODITATI CONSULENTES
P. S. ÆDICULAM HANC. FAC. CUR.
ANNO MDCCLXXXVII.

The origin of the spring is found in a magazine on the left hand side of the Strada Cantieri, on the road to the baths; it is received into a square well, thence flows in an open channel along the floor of the apartment, and under the road to the building on the opposite side of the street, from whence it passes by two pipes, one on each side, into a trough, and thence into the sea. The taste is slightly acid; it is not sparkling even when it first issues from the rock, the carbonic acid gas

* "Calculosis mederi.—Item in Stabiano quæ dimidia vocatur et in Venafrano ex fonte acidolo."—*Pliny's Hist. Nat.*

appearing to be combined in it, in some peculiar manner; but it is very evident to the taste, hence its name of Acidola or Acetosella. It contains no muriate of soda, and but a small proportion of other saline ingredients. It should be taken in as large quantities as possible through the day, both alone and at meals. During its employment, all wines, acids, and fruits should be avoided; the diet should be light and nourishing, and the course should be continued for at least two months. The effect of this water is to alter the quality of the urine, to favour the expulsion of sand and sabulous matter, to prevent the further deposition of calculus, and to promote the expulsion of those concretions already formed. That these are the beneficial results of a course of this water is proved by thousands of cases which have been relieved by it, and the reputation which it has obtained many ages past is confirmed by the experience of the present day.

ACQUA ACIDOLA OR ACETOSELLA.

Sp. grav. 1001,422. Temp. 64°.	Color, clear and transparent. Smell, slightly acid. Taste, sub-acid.		
Ingredients in a pint of water. Analysed by Vulpes, Sementini. and Cassola.	Acqua Acidola.	Analogies.	
		Spa.	Pyrmont.
Free carbonic acid gas.....	1,4838	1,6960	1,6810
—— oxygen.....	0,0231	———	———
—— azote.....	0,0810	———	———
Bi-carbonate of soda.....	1,7500	,1507	———
——————— lime.....	2,8125	,1507	3,5442
——————— magnesia..	,5780	3,5452	8,6000
Sulphate of soda.....	3,0937	———	———
——————— magnesia.....	1,2037	———	4,4334
——————— lime.....	———	———	6,8070
Hydrochlorate of lime.....	4,0750	———	0,1482
——————————— soda....	———	0,1700	———
——————————— magnesia	1,1112	———	1,3852
Silicic acid combined with Oxide of iron..... Calcium and magnesia...	,6094	———	,6085
	16,8214	5,7126	27,2075

The analogy between these three mineral waters is very considerable: in temperature they are identical, and in constituents exceedingly similar. The Acqua Acidola is very diuretic, and but little aperient. It is also excellent for boiling vegetables and cooking; and invalids are recommended to use it for all purposes of food.

ACQUA ROSSA.

The Acqua Rossa is a clear, bright, transparent water, which arises in the Strada Cantieri, to the west of the building for the Acqua Acidola, and on the same side of the road. The stones over which it flows are covered with ferruginous deposit, and from their red color the water has always been called Acqua Rossa. It is a mild chalybeate, holding a small proportion of saline constituents, excepting peroxide of iron. Its medical properties have been held in high estimation for centuries by the natives, who annually resort hither for its use both externally and internally. The Acqua Rossa is found useful in cases of debility, in conjunction with sea bathing. It may be taken in doses of two or three pints in the day, and is excellent when mixed with the wines. The diet should at the same time be generous and nutritious. Gentle exercise should be used morning and evening, and all unnecessary exertion avoided. This water will be found beneficial in all cases of general or local weakness; in dyspepsia, and in uterine debility; in persons suffering from the effects of fever, or any other severe disease, the restorative powers of this chalybeate are excellent. There is no satisfactory analysis extant. The invalid may complete the course with the Acqua Ferrata del' Pozzillo, which is more strongly impregnated.

ACQUA MEDIA, No. I. AND No. II.

This is a saline acidulous water, containing much carbonic acid gas. It has two sources, which arise within four feet of each other, from the limestone rock at the foot of Monte Gauro, opposite the gate of the royal arsenal. The place from which these and other mineral springs originate, has been railed off, and the waters which were formerly allowed to flow together in one stream, are now separated; a pretty flower garden surrounds it, and the whole is kept with tolerable neatness. A portico, erected over the principal springs, defends them from the rain and dust. Those on the right hand corner, on entering this portico, are the Acqua Media. The first of these arises under two stones placed at an acute angle, and runs towards the east; the second has its origin within about four feet of the first, and at right angles with it; it soon mixes with the first stream, and runs in the same direction, and in the same channel. The Acqua Media has a decided aperient and diuretic effect; it is very pleasant to drink, and is often taken at meals with the Gragnano wine. Baths may be taken of this water of a proper temperature, and are always ready for use.

ACQUA MEDIA, No. I. AND No. II.

Sp. grav. 1004,622. Temp. 64°.	Color, transparent, with flocculi of sulphur floating in it. Taste, saline and alkaline. Smell, slightly of sulphuretted hydrogen.

Ingredients in a pint of water. Analysed by Vulpes, Sementini, and Cassola.	Acqua Media	Analogy, Seltzer, Bergman.
Free carbonic acid gas	0,9485	* 5,500
—— oxygen	0,0326	———
—— azote	0,6111	———
Sulphate of soda	6,7500	0,565
——————- magnesia	2,3125	———
Hydrochlorate of soda	18,1490	16,285
——————-- lime	7,5615	———
Bi-carbonate of soda	2,4597	5,409
——————— magnesia	1,9687	1,595
——————— lime	1,1250	0,565
Silicic acid combined with the oxides of lime, magnesia, and iron	1,1673	0,289
Hydro-bromates and sulfo-hydrates		
Alumina and oxide of iron	traces	0,151
Organic matter		
	41,4937	30,359

The Acqua Media is a most valuable and agreeable mineral water. It is useful in all enlargements of the viscera; unloads the portal vessels, and those of the spleen, excites the kidneys to proper secretion, and stimulates the mesenteric glands.

* In the quantitative analysis by Vulpes &c. the alkalies are all supposed to exist as bi-carbonates, in that of Bergman they are calculated as carbonates hence the free carbonic acid is much greater according to the latter chemists than the former,

In some dropsical effusions it has been found very useful; and is particularly beneficial in obviating the obnoxious influence of unhealthy climate; it relieves the anorexia, furred tongue, irregular bowels, mucous accumulations, headache, languor, and low febrile action, so well understood by those who have rssided in hot countries. It is also recommended in herpetic diseases; and inasmuch as cutaneous complaints are almost invariably associated with disordered stomach, it is pretty certain to benefitthose maladies. This water should be taken in doses of about three pints every morning, fasting, using a little exercise between each glass. If, after pursuing this course for a few days, the bowels should be confined, it would be advisable to take some aperient, such as two or three drams of epsom salts dissolved in one of the draughts; but it is not right to go on increasing the quantity of Acqua Media, much beyond that mentioned. It is perhaps best on the whole to commence with a short course of the Acqua del Muraglione, and afterwards to begin the Acqua Media as prescribed. It must be remembered that it is by the general influence on the mass of blood that the good effect of mineral water is produced; and this is best promoted by taking a moderate dose for a considerable time. During the course of the waters the patient should rise early, and take exercise before breakfast, lie down in the middle of the day, and walk or ride again in the evening; the diet should be light and nutritious, the wine should not be of a

strong alcoholic kind, but the wine of the country, as Gragnano taken with Acqua Media. A course of the waters of Castellamare taken in this manner, and persevered in for a due time, will be found to have the best effects in most of those forms of disease for which they are recommended.

ACQUA SOLFUREO FERRATA.

There are a great many forms of Cutaneous disease which are peculiarly benefited by sulphur, used either internally or externally; and there is no way in which its administration is so efficacious as that of mineral waters. Hydrogen is a most excellent solvent of sulphur, and when it is in this manner diffused through water, it is absorbed more completely, and acts upon disease more effectually than in any other mode of exhibition. The quantity of sulphur taken into the system by a course of Harrogate water is in fact exceedingly small; and yet it has much more influence upon certain herpetic and other eruptions than a far greater quantity taken in any other way. There is something so repulsive in the smell and taste of sulphuretted hydrogen generally, that it is only when it is diffused through water and intimately combined as it is in the great laboratory of the earth, that it is possible to exhibit it to persons with irritable stomachs; and yet, in the form of mineral water, it may be given even to the most delicate subjects without disordering them. But these

maladies of the cutaneous surface are most frequently found to occur in persons of a weak and irritable system, in whom it is desirable to associate a tonic with a specific remedy; and these objects are most admirably combined in the sulphurous water of Castellamare, in which chalybeate and saline aperient are associated with the sulphurous water. In the waters of Harrogate and Moffat there is no iron present, but in the Acqua Solfureo Ferrata of Castellamare there is a very considerable proportion. It is therefore valuable as a tonic as well as a sulphur water; and the proportion of saline ingredients is greater than in the Harrogate water. The physician will readily appreciate the value of such a combination.

ACQUA SOLFUREO FERRATA.

Sp. grav. 1006,22. Temp. 65°.	Color, clear and transparent. Smell, decidedly of sulphuretted hydrogen. Taste, brisk, metallic, and slightly of sulphuretted hydrogen.

Ingredients in a pint of water. Analysed by Sementini, Vulpes, and Cassola.	Acqua Solfureo Ferrata.
	Grains.
Free carbonic acid gas	5,9284
Azote	0,1064
Oxygen	0,0803
Sulphuretted hydrogen	0,1170
Bi-carbonate of soda	6,5192
——— lime	2,8625
——— magnesia	1,5000
——— iron	0,0914
Sulphate of soda	3,0937
——— magnesia	1,5625
Hydrochlorate of soda	36,9012
——— lime	5,0535
Silicic acid, combined with the oxides of lime, magnesia, and iron	1,0590
Hydro-bromates, hydriodates, Alumina, Oxide of iron in salts of soda, Organic matter	traces.
	58,6430

There is no analogy for this water in Europe. The combination of acidulous, sulphurous saline, and chalybeate, is most extraordinary and valuable. It is an excellent remedy in diseases of the skin, in chronic urticaria, herpetic eruptions of all kinds, prickly heat, chronic psora, scrofulous diseases of various forms, leucorrhea, blenorrhea, &c. It should be taken in doses of one or two pints in the morning, fasting, and another an hour before dinner.

The spring issues from the limestone rock in great abundance by a quadrangular aperture on the north side of the garden, about thirty feet from the Acqua Media, and within a few feet of the Acqua Ferrata del Pozzillo; it mixes immediately in the general current, and exhales an ample odour of sulphuretted hydrogen over the whole garden. Various bubbles of gas arise from the bottom of the stream, shewing that there is a large quantity of free gases in the Acqua Solfurea which is not held strongly by the water. There are some other minor springs of the same character which flow into the main stream on the right and left, the constituents of which have not been investigated.

ACQUA DELLA SPACCATA.

SP. GRAV. 1004,623. TEMPERATURE 64°.

This water rises from the rock nearly opposite the Acqua Solfureo Ferrata, and on the south side of the stream. It resembles the Acqua Media in character, but is more decidedly aperient, containing in the pint 52,712 grains of saline ingredients. It has the same medical properties, and is applicable in the same cases as the Acqua Media; it emits a smell of sulphuretted hydrogen, and has a saline taste.

ACQUA DELLA ROGNA.

This water flows from the rock a few feet to the east of the former spring. It has an hepatic smell, and saline taste; it contains traces of sulphuretted hydrogen and carbonic acid gas, and saline ingredients similar to the Acqua Media. It is said to be useful in cases of itch, whence its name.

ACQUA CONTRA LA TINEA, No. I. AND No. II.

These two springs flow from the rock on the south side of the garden, between the last aud the Acqua Ferrata del Pozzillo, running towards the north, and soon mingling with the general stream. They are precisely similar to the Acqua della Rogna, and exhale a smell of sulphuretted hydrogen, bubbles of which aud of carbonic acid gas arise from the stream. The saline ingredients are similar to the Acqua Media. These springs are celebrated for their use in cases of tinea capitis, and there are doubtless many cases of that disease in which shaving the head aud frequently bathing with this water will be highly beneficial, far more so than the oiled silk and hyper-stimulant system which it has been so much the fashion to employ, although the heat of the head and coustant succession of crops of eruption would rather suggest a more cooling treatment.

ACQUA FERRATA DEL POZZILLO.

This spring arises on the eastern side of the garden, opposite the first Acqua Media; a small well, about two feet square, and three feet deep, forms its reservoir. Bubbles of gas are constantly arising from the bottom, which are of carbonic acid. This is a very valuable chalybeate, abounding in carbonic acid gas, and containing a large proportion of saline ingredients; hence it acts as a gentle aperient as well as a tonic; an important combination, inasmuch as the tonic in this form is not so apt to excite the circulation. The taste is metallic, but brisk, saline, and refreshing. It is taken in doses of a pint two or three times a day, and makes an excellent dinner beverage mixed with wine. A course of the water should be employed in conjunction with sea bathing, and should be continued for at least two months. The diet should be generous and nutritious, combined with gentle exercise on a donkey, or in a carriage. It is most useful in all cases of general debility, in dyspepsia arising from weakness of the stomach, in chlorosis, amenorrhea, and other diseases of uterine atony, in sterility proceeding from the same cause, in passive menorrhagia and leucorrhea, in various diseases associated with languid circulation, in scrofulous children, &c.

ACQUA FERRATA DEL POZZILLO.

Sp. gr. 1004,977. Temperature 65°	Color, clear and transparent. Taste, saline, very brisk and chalybeate. Smell, none.		
Ingredients in a pint of water. Analysed by Vulpes, Sementini, and Cassola.	Acqua Ferrata del Pozzillo.	Analogies. Tœplitz, Ambrozzi.	Schwalbach, Kastner
	Grains.	Grains.	Grains.
Free carbonic acid.....	7,2289	1,16	2,6
Azote.....	0,0503		
Oxygen.....	1,4073		
Bi-carbonate of soda.....	6,5469	12,240	0,175
——— ——— magnesia..	2,7500	———	3,125
——— ——— lime	1,2500	0,340	2,110
——— ——— iron.....	0,1875	0,036	0,835
Sulphate of soda.....	3,2344	1,696	0,600
——— ——— magnesia.....	4,6875	———	———
Hydrochlorate of lime.....	5,0781	———	———
——— ——— soda	16,0366	0,776	0,186
Silica	———	0,420	———
Silicic acid combined with oxides of lime, magnesia, and iron.....	,8593	———	———
Sulfo-hydrates, hydriodates, Alumina, oxide of manganese.....	traces.	———	———
Organic matter			
	40,5794	15,508	7,031

The Acqua Ferrata del Pozzillo, as will be seen by the table, contains a considerably larger proportion of iron than the water of Tœplitz, and a considerable quantity of carbonic acid gas, on which account it is very grateful to the stomach. It is also superior to the water of Schwalbach in all important saline constituents. It very nearly approaches in composition the mineral water of Leamington, but its proportion of iron is greater, and the quantity of free carbonic acid makes the Acqua Ferrata peculiarly agreeable.

ACQUA FERRATA NUOVA.

About eight or ten yards from the former well, and facing the south, is a spring discovered by Don Catello Trojano, which is called the Acqua Ferrata Nuova. This is enclosed in a small well about two feet square, and is situated close to the stream which conveys away the mineral waters. It is termed *Nuova* in distinction to the Acqua del' Pozzillo, which was formerly termed Antica. It is a good chalybeate, of very similar composition to the last, and is employed in similar cases, but more particularly externally as a collyrium in weakness of the eyes, for which it has great reputation. It is also very useful as an application to old ulcers of the legs, especially when combined with opium internally, as recommended by Mr. Skey.

The Acqua Ferrata Nuova has not been analysed minutely; it contains rather more iron and other saline ingredients, but is much more still than the former water, having far less free carbonic acid gas.

ACQUA FERRATA NUOVA.

Sp. grav. 1004088, Temp 65°.	Colour, clear and transparent. Taste, brisk, saline, chalybeate. Smell, none.

Ingredients in a pint of water. Analysed by Cassola, Vulpes, Sementini.	Acqua Ferrata Nuova.
Free carbonic acid gas	6,8868
Azote	0,0503
Oxygen	0,0879
Bi-carbonate of soda	6,0781
——— magnesia	2,7500
——— lime	2,5912
——— iron	0,0292
Sulphate of soda	3,0937
——— magnesia	2,5912
Hydro-chlorate of soda	18,4503
——— lime	3,7924
Silicic acid combined with oxides of lime, magnesia, and iron	0,8406
Hydriodates, alumina, peroxide of iron	traces.
	40,2467

This water is given in the morning and at noon in doses of a pint each. It is useful in all cases of uterine debility, in amenorrhea, and chlorosis, and also in menorrhagia resulting from atony of the vessels of the uterus. It is prescribed also in dyspepsia arising from debility with excellent results.

ACQUA SOLFUREA DEL MURAGLIONE.

The Acqua Solfurea del Muraglione rises at some distance from the baths, about a hundred yards out of the town, and fifty yards from the sea. There is a small building over these springs, within which are two excavations, one in each corner, under the rock. The water flows from these sources into a stone receptacle as long as the building, and about fourteen inches wide by sixteen deep. Bubbles arise from the bottom of the trough which have a smell of sulphuretted hydrogen gas. Water similar to this, as I have before stated, arises in various parts of the coast, near the margin of the sea, with which it is immediately mixed; there is, therefore, no fear of the sulphurous springs ever being lost to the visitors of Castellamare. There are a great number of diseases in which a medicinal water of this character is most useful, and it is one which is not easily obtained. The waters of Harrogate are reputed as peculiarly beneficial in many cutaneous affections; and the Acqua Muraglione is similar to the Harrogate water, only that it is more active, having one third more of saline ingredients.

ACQUA SOLFUREA DEL MURAGLIONE.

Sp. grav. 1006,186. Temp. 67°.	Color, somewhat opaque, with flocculi of sulphur in it. Taste, strongly saline and of sulphuretted hydrogen. Smell, sulphuretted hydrogen.

Ingredients in a pint of water. Analysed by Sementini, Cassola, and Vulpes.	Acqua Solfurea del Muraglione.	Analogy, Harrogate.
Free Carbonic acid gas	1,8144	0,5600
Sulphuretted hydrogen...	0,3462	,4709
Oxygen	0,0382	———
Azote.....	0,1770	———
Bi-carbonate of soda	5,9375	———
——————— magnesia.....	2,2500	3,8590
——————— lime.....	2,8125	1,0085
Sulphate of soda	4,5000	———
——————— magnesia.....	1,8750	0,3560
Hydrochlorate of soda	42,1730	42,9157
——————— lime	5,9510	0,2142
——————— ——— magnesia	3,0587	0,6327
Silicic acid combined with oxides of lime, magnesia, and iron.....	2,0000	
Hydro-bromates and Sulfo-hydrates of lime, magnesia, and soda.....	traces.	
Oxides of iron and alumina in the salts of soda after the precipitation of bi-carbonates.....	ditto.	
	70,5577	48,9861

The properties of this mineral water are very important. In obstructions of the viscera, of the liver, spleen, pancreas, or mesenteric glands, in obstinate constipation, in hœmorrhoidal affections, in all diseases of plethora, in apoplectic diathesis, in epileptic tendencies, in obesity, in all those cases this water is often exceedingly valuable; and also in cutaneous diseases, in suppressed eruptions, in chronic psora, used both externally and internally, it is very beneficial. Its action on the bowels, in clearing out the intestinal canal, is prompt and efficacious. When taken in moderate doses for some time, it unloads the portal system and produces a feeling of lightness and of health. As, however, its action is often considerable, producing very profuse evacuations, it should be used with caution, and not in great quantities, excepting under proper direction. It is beneficial in gouty cases of a tonic character, but it is not proper in atonic gout, when the patient is much debilitated. The power of this water in some cases of dropsical accumulation is very striking; the discharge of large quantities of liquid evacuations, and great diuretic effect, fulfil two very obvious indications in these disorders, and have the happiest results, especially being combined with a pure and tonic atmosphere. It is peculiarly celebrated for relieving obesity, to which the Italians are much disposed from ther indolent and sedentary habits, doubtless induced by climate, and which is especially observable in females. There are few mineral waters so rich in

saline constituents as the two Acqua del Muraglione, and scarcely any in which the medical effects are more decidedly useful, when properly administered.

ACQUA NUOVA DEL MURAGLIONE.

This spring rises a few paces beyond the former, under the road leading to the convent of Pozzana; it is received into a square well, badly kept, although its valuable properties ought to ensure careful preservation. This is a simple saline water, without any notable quantity of sulphuretted hydrogen; it is very analogous to the water of Cheltenham, and to the springs of Maximilian and Rakoczi of Kissingen; it is given in the same class of cases, and with commensurate benefit. The old Indian who has suffered from the effects of climate and free living will find this water very superior to that of Cheltenham, combined with a climate still more congenial to his health.

ACQUA DEL MURAGLIONE NUOVA.

Sp. grav 1006,186. Temp 66°.	Taste, strongly saline. Odor, no particular odor. Color, transparent and bluish.			
Ingredients in a pint of water. Analysed by Vulpes, Sementini, and Cassola.	Acqua del Muraglione Nuova.	Analogies.		
		Cheltenham.	Kissingen. Maximilian.	Rakoczi.
	Grains.	Grains.	Grains.	Grains.
Free carbonic acid gas....	1,8144	2,12	2,15	2,14
Oxygen	0,0379	———	———	———
Azote.....	0,1770	0,79	———	———
Bi-carbonate of soda.....	6,9432	———	0,35	0,82
——— magnesia..	3,2350	3,8590	1,82	2,50
——— lime	2,8134	1,0085	2,70	3,82
——— iron.....	———	———	———	0,68
Sulphate of soda.....	9,4632	———	1,85	2,00
——— lime	———	———	0,77	2,50
——— magnesia.....	6,3256	0,3560	———	———
Hydrochlorate of soda....	52,5208	42,9157	18,25	62,05
——— lime....	6,8510	0,2142	———	5,85
——— magnesia	3,6586	0,6327	3,05	6,85
Lithion and manganese....	———	———	———	vestiges.
Silica	———	———	0,47	2,25
Alumina	———	———	———	0,18
Silicic acid combined with oxides of lime, magnesia, and iron	2,3212	———	———	———
Hydrobromates and Sulfo-hydrates of lime, soda, and magnesia.....	traces.	———	———	———
Oxides of iron and alumina in the salts of soda after the precipitation of the bi-carbonates.....	ditto.	———	———	———
Organic matter.....				
	73,6587	48,9861	29,25	89,50

The analogy of this water, with those of Cheltenham and of Kissingen, is very great. The Rakoczi, at Kissingen, contains more common salt, but less of the bi-carbonate of soda. The Cheltenham water is very similar, but contains less saline ingredients. The Acqua Nuova del Muraglione is rather more active than the Acqua Solfurea del Muraglione as it contains somewhat more saline matter. It is given in the same cases as the lattter.

We have now given a rapid sketch of the mineral waters of Castellamare, and have shewn that they are analogous and equal to the most celebrated waters of Spa, Pyrmont, Seltzer, Tunbridge, Leamington, Kissingen, Cheltenham, Harrogate, Schwalbach, Ems, and Tœplitz; that they are in many instances superior, as being richer in saline ingredients, and that they are in abundant quantity and occuring in a most lovely climate. It has also been shewn that at Ischia, and at Pozzuoli, thermal springs in great profusion and of the highest character abound, in strict analogy, both in temperature and composition, to the distinguished baths in Germany, Carlsbad, Wiesbaden, Baden-baden, Wildbad, and Gastein; and that there are others which are of very rare and important chemical composition. There remains one more very interesting spring on the shore of the bay which will now be described.

ACQUA VESUVIANA, ACQUA NUNZIANTE, OR ACQUA TERMO-MINERALE DELLA TORRE DELL' ANNUNZIATA.

This water has been known for ages, and has always been held in very high and deserved estimation. It rises from a mass of lava, almost on the level of the sea, and close to the shore at Torre dell' Annunziata. It is in profuse quantity, and rushes up with considerable violence. It has a smell similar to Naptha, or coal tar, and gives off carbonic acid gas in great quantity, so that it is impossible to hold the head over the spring for any time. It has even been proposed to collect the gas for purposes of manufacture, and there is no doubt that soda water might be made in any quantity from the carbonic acid supplied from this source. The water is of the temperature of 90° of Faht., and is in a proper state to use as a most luxurious bath. There is a ferruginous deposit on the stones over which it flows.

ACQUA VESUVIANA, ACQUA NUNZIANTE, OR ACQUA TERMO-MINERALE, DELLA TORRE DELL' ANNUNZIATE.

Sp. grav. 1003,7610. Temp. 90°.	Color, clear, bright, transparent. Taste, saline and mild alkaline. Smell, of naptha, or coal tar.

Ingredients in a pint of water. Analysed by Ricci.	Acqua Nunziante.
	Grains.
Free carbonic acid gas	5,4113
Bi-carbonate of soda	8,9063
——————— potassa	1,4625
——————— magnesia	5,0000
Carbonate of lime	2,7343
——————— iron	0,0566
Sulphate of soda	3,8750
——————— potassa	0,9375
——————— magnesia	,3125
Chloride of sodium	5,3125
——————— potassa	1,9375
Hydrochlorate of magnesia	2,6956
Phosphate of lime	0,1250
Silica	0,5625
Peroxide of iron	0,1035
——————— titanium?	
	39,4316

This water is recommended in visceral obstructions, in dyspepsia, in general debility, in gouty affections, in herpetic diseases, in syphilitic pains, in many disorders of the stomach and bowels, of the uterus, and of the kidneys, in scrofula, and rachitis, in dropsical effusions, as anasurea, and ascites, in glandular enlargements, in headaches, and in diseases of the urinary apparatus.

The quantity of saline ingredients, the large proportion of gas which it also contains, and the agreeable temperature at which it issues from the spring, renders this one of the most valuable mineral waters with which we are acquainted. The locality of this spring at the base of Vesuvius proves its origin to be specially volcanic. Most striking is the situation in which it is placed: vast blocks of lava surround the spot, and for several miles along the coast, high walls of the same material abruptly arrested in its course, and suddenly cooled by contact with the sea, mark the powerful agency by which it has been effected; and even the bottom of the bay, to a great distance, is here paved with lava which has flowed into the sea in a molten state, so that an anchor will not hold. Again and again have the towns at the foot of the mountain been destroyed, yet, no sooner was the liquid rock sufficiently cooled, than it formed the foundation for a new dwelling for the poor inhabitant, whose former one is encased in stone beneath. The floor of the new church at Torre del Greco is placed on the roof of the former edifice, and the tower, bereft of its fair proportions, still forms the campanile to the successor. How vast must be the cavern beneath the surface from which so much liquid stone has been ejected. The ashes alone that have been wafted away on the winds would probably form a mountain of prodigious size. It is not wonderful, then, to find rivers obliterated, straits filled up, and

the character of the neighbouring continent entirely changed; that which was once an island being attached to the continent, and portions of the continent separated from the main land and converted into islands. How mighty the agency that has been and still is in constant operation here; and how infinite the power of that Being who wields and controls all these marvellous energies according to the "councils of his own will," and the workings of his mighty power.

CHAPTER XI

GENERAL OBSERVATIONS.

The examination of the analyses in the preceding tables affords much ground for speculation. It will be found that the medicinal qualities of a mineral water do not depend solely on the quantity of saline ingredients contained in it, but upon some mode of combination, or diffusion, concerning which we are still in comparative ignorance. The Acqua Acidola of Castellamare has been for ages celebrated for the cure of calculous complaints, and yet the saline constituents are in less proportion than in almost any one in the list; but this water exhibits a phenomenon respecting its composition which does not appear in any other with which we are acquainted: viz. the carbonic acid being in a fixed and fluid condition rather than in the gaseous form, as the water is still, instead of sparkling, and has a sub-acid taste, and yet the quantity of gas driven off on the application of heat is very large.

Much of the reputation of mineral waters is doubtless owing to adventitious causes, to beauty of site, to the influence of fashion, or to the varieties of amusements with which the place abounds. The waters of Castellamare and Ischia, however, are indebted to none of these adventitious

aids for their reputation ; and if the hidden operations of nature have done much in furnishing so rich a series of mineral waters, much is it to be regretted that the enterprise of the inhabitants, and the assistance of the government are not exerted in a far greater degree than they have hitherto been, with a view to render these places as attractive and as frequented as they deserve.

The effects of mineral waters cannot but suggest to us the idea that in our prescriptions generally we have but little advanced in the science of the exhibition of medicines ; and it is a question whether we are not even at the present day imperfectly informed as to the best mode of producing a specific impression upon the constitution. In the extemporaneous prescription of the physician the patient desires some present and obvious effect, and is dissatisfied and discontented if such be not evident; on this account he is often obliged to prescribe in consideration of the wishes of the patient rather than in accordance with his own opinion and judgment. Drugs are exhibited in large doses, in nauseous forms, and in a manner calculated to put the system on its guard against the introduction of a poison ; whereas the mode in which medicines are prepared in the great laboratory of the earth is, that they are mixed in minute doses, diffused through large quantities of fluid, the taste concealed or made agreeable by carbonic acid or other gases, with which they are largely impregnated. They are thus presented to the orifices of the absorbent

vessels in the form most congenial to their functions and readily appreciated by the circulation concealed, by virtue of their natural combination being so blended as to produce an impression far superior to that obtained by more artificial means. They mix with the blood and humours of the body, and thus exert an influence upon every part of the system. Whoever has taken the waters of Cheltenham or of Castellamare is aware that if he take a large quantity the primary purgative effect is violent, and here the advantage ceases. But if he begin with moderate doses, not so great as to excite great action at first, and continue the water for some time, the result ultimately produced is infinitely greater, the whole excretory system is unloaded, the capillaries seem to throw out their fluids, and the quantity evacuated is enormous. The whole glandular system connected with the digestive apparatus is influenced, the liver is relieved by disgorgement, and the entire intestinal canal discharges itself of accumulations which have been very long in collecting. And thus far the principle on which is founded the eccentric practice of homæopathy is the cause of unquestionable good; it has confirmed the impression already existing in the minds of physicians, that very powerful effects may be obtained by the repetition of very minute and apparently inert quantities of medicine. It has long been known that valuable results were produced in the cure of specific diseases by the exhibition of very small doses, that

the twelfth of a grain of corrosive sublimate once or twice a day had a peculiar effect in curing forms of syphilitic malady which had resisted the rubbing in of ounces of mercurial ointment, or drams of blue pill taken by the mouth. That half a grain of blue pill taken at night had often produced an effect that five grains of calomel had failed to do. There is nothing irrational in the proposition, to reduce the quantity of medicine taken into the stomach within such limits as may retain its remedial or specific influence, without subjecting the constitution to the unnecessary irritation often consequent on the exhibition of larger doses. By such treatment the constitution does not take alarm, and the agent employed is received into the blood without producing weakness or reaction of any kind. No one will doubt the medicinal effect of the Harrogate water and the Acqua Solfurea of St. Lucia at Naples, of which thousands drink annually. Now it is probable that the curative effect is owing to the sulphur, of which hydrogen forms so excellent a solvent, and by which it is introduced into the system. If we administer the sulphur sublimatum or præcipitatum in any form or quantity, we fail to produce an impression on various cutaneous diseases, with half the force of that which is effected by the mineral water, and yet how small a quantity of the medicine does it actually contain. The chalybeate waters of Tunbridge and the Acqua Ferrata del Pozzillo (the latter one of the best chalybeate

waters in Europe) have an effect on some constitutions we vainly attempt to produce by green mixture, steel pills, or any other compound.

And as with quantity so also as regards the form of exhibition will the same observation apply. An active medicine applied to the nerves of the stomach in a solid form is not likely to be admitted into the system so readily, nor to be diffused through the constitution so completely, as when taken in a large quantity of fluid, its qualities concealed by agreeable menstrua, and presented in a form to promote appetency, rather than to excite disgust. And in this manner we find that medicinal substances contained in mineral waters, even in very minute doses, have a decided and obvious benefit; and those springs which contain only *traces* or *vestiges* of iodine, brome, and other active substances, possess a most efficient remedial agency, however minute may be the quantity and proportion of the specific agent that is absorbed by the circulation.

MINERAL WATERS OF THE BAY OF NAPLES.

Name of the Spring.	Where found.	Temp.	Character.	Saline ingrets. in a pint	Analogy.	Analysed by
Acqua Solfurea	San Lucia, Naples.	64° 4	Sulphureous	grains. ,174	{Moffat, Aix-la-Chapelle,	Ricci
——— Ferrata	Ditto ditto	68°	Chalybeate	,269	Tunbridge	Ditto
——— Bagnuoli	Bagnuoli, near ditto	107°	Aluminous	31,7499	———	Cassola
——— Pisciarelli	Solfaterra	156°	Ditto	51,260	———	Vulpes
——— Subveni Homini .	Pozzuoli	103°	Saline and Alkali	56,978	Wiesbaden	Lancclotti
——— dell' Antro	Do. Temple of Serapis	106°	Ditto	29,147	———	Ditto
——— della Macchini ..	Ditto	106°	Ditto	29,147	———	Ditto
——— dei Lipposi	Ditto	90°	Ditto	44,852	Ems	Ditto
——— Media	Ditto	90°	Ditto	24,8697	Castellamare	Ditto
——— di Pontana.....	Ischia	94°	Ditto	——	———	Cas. Lan. & Gua
——— di Fornello.....	Ditto	138°	Ditto	——	———	Ditto
——— di Castiglione....	Ditto	167°	Ditto	69,187	Carlsbad	Berzelius
——— di Gurgitello	Ditto	158°	Ditto	40,6098	Ditto	———
——— di Cappone.....	Ditto	98°	Ditto	39,3224	———	Guarini
——— dell' Occhio	Ditto	100°	Ditto	23,7911	Wildbad	Ditto
——— Spenna Polastro..	Ditto	180°	Ditto	——	Baths of Lucca.	———
——— della Colata ~~~	Ditto	179°	Ditto	——	———	———
——— Cociva~~~~~~~~~~	Ditto	190°	Ditto	——	———	———
——— di Sinigalla~~~~~	Ditto	145°	Ditto	——	———	———
——— Ferrata ~~~~~~~~	Ditto	——	Ditto	——	———	———
——— Bagni d'Oro ~~~	Ditto	150°	Ditto	——	———	———
——— di Rivaz ~~~~~~~	Ditto	178°	Ditto	——	———	———
——— di Tamburo ~~~~	Ditto	210°	Ditto	——	———	———
——— della Rita ~~~~~	Ditto	158°	Ditto	24,2157	———	Covelli & Guarini
——— di Verde ~~~~~~~	Ditto	178°	Ditto	——	———	———
——— di Santa Restituta	Ditto	122°	Ditto	126,5253	———	Lancelotti
——— di San Montana~~	Ditto	131°	Ditto	——	———	Ditto
——— di Francesco 1mo	Ditto	113°	Ditto	36,5922	Gastein	Covelli & Guarini
——— di Citara~~~~~~~	Ditto	125°	Ditto	32,2694	———	Lancelotti
——— di Olmitello ~~~	Ditto	112°	Ditto	94,0051	———	Guarini
——— delli Pettrelli ~~	Ditto	205°	Ditto	——	———	———
——— di Nitroli~~~~~~~	Ditto	86°	Ditto	4,1085	———	Lancelotti
——— d' Isabella di Bor-bone~~~~~~~	Ditto	107°	Ditto	31,7706	{——— Seltzer	Ditto
——— del' Capitello ~~~	Ditto	152°	Ditto	48,4694	———	Guarini & Covelli
Stufa di San Lorenzo~~~	Ditto	136°	———	——	———	———
——— Caccinto ~~~~~~	Ditto	160°	———	——	———	———
——— Testaccio~~~~~~	Ditto	120°	———	——	———	———
——— Castiglione ~~~~	Ditto	120°	———	——	———	———
Acqua Ferrata ~~~~~~~	Castellamare	64°	Chalybeate	——	Tunbridge	———
——— Rossa ~~~~~~~~~~	Ditto	64°	Ditto	——	———	———
——— della Speccata ~~	Ditto	64°	Saline	52,712	———	———
——— della Rogna ~~~~	Ditto	——	———	——	———	———
——— contra la Tinea, No. 1 & II~~	Ditto	——	———	——	———	———
—— Ferrata del Pozzillo	Ditto	65°	Ditto	40,5794	Tœp. Schwal.	Vul. Cas. & Seme.
——— Ferrata Nuova ~~	Ditto	65°	Ditto	40,2467	———	Ditto
——— Solfureo Ferrata	Ditto	65°	Ditto & Sulph.	58,6432	———	Ditto
——— Acidola ~~~~~~~~	Ditto	64°	Acidulous	16,8214	Spa, Pyrmont,	Ditto
——— Media No. I ~~~~	Ditto	64°	Saline	41,4937	Seltzer	Ditto
——— No II~~~~	Ditto	64°	Ditto	41,4937	Ditto	Ditto
—— Sol. del' Muraglione	Ditto	67°	Ditto & Sulph.	70,5577	Harrogate	Ditto
—— Nuova del' Muraglione~~~~~	Ditto	67°	Ditto	73,6587	Chel. & Kissen.	Ditto
—— Vesuviana ~~~~~~~	Torre del Annunziata	90°	Ditto	39,4316	———	Ditto
Stufa di San Germano ~~	Lago d'Agnano	160°	———	——	———	———
———Nerone~~~~~~~	Baiæ	180°	———	——	———	———

CHAPTER XII.

CONCLUSION.

It is evident that a situation facing the south and sheltered from the influence of the north, west, and east, has the aspect for a winter's residence in a southern climate; and that a situation shielded from the south and open to the north and east must be the most desirable residence during the summer months; and these are precisely the aspects of Naples on the one hand, and the towns on the part of the bay opposite to it, on the other. The latter are only eligible for a residence from the end of May, till the beginning of October. When the autumnal rains fall and the sun has less power, the invalid should remove into Naples, which is at that season equal, if not superior, as a place of resort, to any other in Europe.

The assertion that the climate of Naples is particularly variable is not founded in fact. On the contrary, it has been shewn that the seasons recur with extraordinary regularity, that the variations of the thermometer are very moderate and remarkably uniform, and that although there is no pretence that it is exempted from tramontana winds, yet that it is not so much exposed to them as most of the other cities on the continent, because it is distant and protected on almost all sides from the mountains.

The chain of the Appennines passes down the whole of the Peninsula of Italy; there is no place that is more than fifty miles from them, in addition to which there are numerous ranges subsidiary to the great chain, which intersect the whole country at various shorter intervals, and therefore when the mountains are covered with snow no place is entirely exempt from cold winds. But the influence of the sea tends to moderate and equalize the temperature; and the winds that blow at Naples from sea-ward are mild southerly gales, which, during the winter, are warm and agreeable. It cannot, however, be denied that there are certain cases in which the air of Naples is too stimulating, and in which the atmosphere of Rome and other places would be more congenial.

The abundance and the variety of the mineral waters which are found in the bay have been briefly described. Thermal springs exist which are analogous, and in no respect inferior to the most celebrated hot springs of Germany or Savoy, as do cold medicinal waters similar to the most valued springs of England or any other country.

Thus there may be found within the circuit of the bay of Naples remedial resources of great variety and efficacy, a climate eminently beautiful, society of the highest character, amusements healthful and varied, and a government to the utmost degree courteous to strangers.

It is earnestly hoped that the resources of that government will be exerted for the purpose of

rendering the various mineral waters and the interesting objects of antiquity and of science in its neighbourhood both convenient and accessible, and it will be amply repaid by the rank and wealth that will continually be attracted to its shores.

The journey from England to Naples is now performed as easily and with as few inconveniences as that from London to Edinburgh. The invalid to whom the motion of a carriage is painful, may perform the greater part of the way by steam boat. From London to Havre, and Havre to Paris, by steam; Paris to Chalons, by road; Chalons to Lyons, and Lyons to Avignon, by steam; Avignon to Marseilles, by road; Marseilles to Naples, by steam. Or the route may be taken from London to Boulogne, thence to Paris and Chalons, and afterwards by steam to Lyons and Avignon, and by land thence to Marseilles. The steam boats leave Marseilles for Naples on the following days of each month:

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